REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol RCS:

INSTRÚCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPONENT INFORMATION					
1. TO (Environmental Planning Function) 733 CED/Environmental Element	FROM (Proponent organization and functional address symbol) Old Dominion Utility Service	1	ELEPI	HONE 1	VO.
3. TITLE OF PROPOSED ACTION Alternate Wate Line Supply System and Booster S 4. PURPOSE AND NEED FOR ACTION (Identity decision to be Previous water outages due to water main break an connection.		l	ater		
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVE See attached Environmental Assessment/Finding of	ES (DOPAA) (Provide sufficient details for evaluation of the total action.) f No Significant Impact.				
6. PROPONENT APPROVAL (Name and Grade) JEFF KAPINOS	6a. SIGNATURE P. Kupin	6b. D	DATE 2013	0606	
SECTION II - PRELIMINARY ENVIRONMENTAL SURVE Including cumulative effects.) (+ = positive effect; 0	Y. (Check appropriate box and describe potential environmental effects = no effect; = adverse effect; U= unknown effect)	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (I	Noise, accident potential, encroachment, etc.)		\square		
8. AIR QUALITY (Emissions, attainment status, state implement	etation plan, etc.)		V		
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11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)			V		
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)					
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)					
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)					
15. SOCIOECONOMIC (Employment/population projections, so	rhool and local fiscal impacts, etc.)		V		
16. OTHER (Potential Impacts not addressed above.)	·				
SECTION III - ENVIRONMENTAL ANALYSIS DETERMIN	ATION	·,			
17. PROPOSED ACTION QUALIFIES FOR CATEGORIC. PROPOSED ACTION DOES NOT QUALIFY FOR A C 18. REMARKS An Environmental Assessment was prepared with a	CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.				
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JOINT BASE LANGLEY-EUSTIS Newport News, Virginia

ALTERNATE WATER SUPPLY SYSTEM

FINAL - June 2013

FINDING OF NO SIGNIFICANT IMPACT CONSTRUCTION AND OPERATION OF AN ALTERNATE WATER SUPPLY SYSTEM AND BOOSTER STATION JOINT BASE LANGLEY-EUSTIS, FORT EUSTIS CITY OF NEWPORT NEWS, VIRGINIA

Pursuant to the Council on Environmental Quality Regulations (Title 40 of the Code of Federal Regulations [CFR] Parts 1500–1508) for implementing the procedural provisions of the National Environmental Policy Act (Title 42 of the United States Code 4321 et seq.) and 32 CFR Part 989 (Air Force Environmental Impact Analysis Process), Joint Base Langley-Eustis, Fort Eustis (JBLE-FE), conducted an Environmental Assessment (EA) of the potential environmental, cultural, transportation, and socioeconomic effects associated with the construction and operation of an alternate water supply system and booster station.

Proposed Action

Old Dominion Utility Service (ODUS) owns and operates the water and sanitary sewer facilities at JBLE-FE. The existing water distribution system consists of approximately 50 miles of pipe, a water booster pumping station and two elevated storage tanks. The base is currently fed through a single 14-inch water line, which extends from Warwick Boulevard down Washington Boulevard to the existing water booster station in Building 6. The current JBLE-FE water distribution system operates on the levels of two elevated tanks. These tanks are filled by a water booster station pumping from the lower pressure south zone of the Lee Hall Water Treatment Plant (WTP). Newport News Waterworks (NNWW) operates the Lee Hall WTP. Similar to the existing water system at JBLE-FE, the alternate water supply system would be fed by the Lee Hall WTP.

ODUS proposes to install a new water supply point (hereinafter called the 'Proposed Action') for the Fort Eustis portion of JBLE. Construction of this project would include activities such as excavation, site grading, trenching and pipe installation. The Proposed Action includes the following design features: meter vault, backflow preventer, water booster station, Approximately 2,450 linear feet of buried 12" pipe, and crush and run maintenance access road; approximately 1,700 linear feet long and 12 feet wide. A secondary connection would provide redundant water service to account for potential future water outages, which would improve system reliability. In order to meet demands, construction shall be completed, with the alternate water supply system fully operational, no later than September 30, 2013.

Purpose and Need

There have been previous water outages on JBLE-FE due to a water main break and due to required maintenance on the Newport News water line. Using average demands and assuming full elevated storage tanks, the existing water system would remain operational for less than 24 hours. The purpose of the Proposed Action is to create a secondary water connection, thereby providing redundancy and improving system reliability during any future outages to the main system.

Alternatives Considered

For Proposed Actions that require the preparation of an EA, the CEQ regulations, NEPA, and Air Force guidance and policy require that appropriate alternatives for the Proposed Action be described and evaluated. A reasonable range of alternatives that meet the underlying purpose and need for the Proposed Action should be analyzed for their environmental impacts in order to support a fully informed decision. Prescribed by CEQ and Air Force regulations, the No Action Alternative serves as a baseline against which the impacts of the Proposed Action and alternatives can be evaluated. Under the No Action

Alternative, JBLE-FE would forgo the proposed alternate water supply system and would have limited operational time in the case of an outage in the existing system.

Two primary alternatives for the Proposed Action were identified and evaluated. Alternative 1, on Shellabarger Drive, was later divided into two options, 1A and 1B. Alternative 2 is in the Oakland Industrial Park. Prior to selecting the Preferred Alternative, these alternate locations were evaluated and Alternative 1A and 1B were eventually dismissed. Alternative 1A and 1B presented a number of obstacles in comparison with Alternative 2 (the Preferred Alternative) that included access issues, increased impacts to natural resources, design challenges and cost. A detailed analysis of each alternative and the reasons for its elimination are discussed in the body of this EA.

Factors Considered in Determining that No Environmental Impact Statement is Required

The EA, which is attached hereto and incorporated by reference into this Finding of No Significant Impact (FNSI), examines the potential effects of the Proposed Action and the No Action Alternative on resource areas and areas of environmental and socioeconomic concern: land use, aesthetic and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics, environmental justice, transportation, utilities and hazardous materials. Implementing the Proposed Action would result in a combination of short and long-term minor adverse and beneficial effects. The Preferred Alternative is expected to disturb approximately 1.18 acres of land. Minor impacts to natural resources within the limits of the Proposed Action are expected as a result of constructing the Preferred Alternative. These include vegetation removal and impacts to wetlands. Additionally, the Preferred Alternative is expected to create short-term, minor, adverse impacts on air quality, noise, soils, and transportation, primarily associated with construction activities. Operational activities will produce few, if any, significant adverse effects. No impacts to rare, threatened or endangered species are anticipated. Additionally, no historic properties will be impacted within the project boundaries.

Mitigation measures will include the use of best management practices during and after construction to avoid and minimize adverse environmental effects. Construction activities would be covered under an approved plan for erosion and sediment control, using stormwater management and erosion control Best Management Practices required by Virginia Department of Conservation and Recreation (DCR). The project will adhere to any applicable federal, state, and local air regulations, such as those for the control of fugitive dust. Disturbed areas will be revegetated with native species and re-seeding will adhere to DCR requirements for sediment control.

Public Review

The draft EA and draft FNSI were available for public review and comment for 30 days, beginning upon the publication of notices of availability (NOA) in *The Daily Press* (Newport News, VA) on March 19, 2013, and March 20, 2013. Copies of the draft EA and draft FNSI were available for review and comments at Groninger Library BLDG 1313, Fort Eustis, VA 23604; Grissom Public Library, 366 DeShazor Drive, Newport News, VA 23606, and Christopher Newport University Library, 1 University Place Newport News, VA 23606, and online at http://www.peninsulawarrior.com. No public comments were received.

Coordination with federal and state agencies for the proposed project was initiated in January 2013 to solicit applicable comments related to the corresponding areas of jurisdiction and to obtain concurrence with the initial findings. Agencies contacted include the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA) Region III, U.S. Department of Agriculture Natural Resources Conservation Service, Newport News Department of Planning, the Virginia Department of Historic Resources (DHR) and the Virginia Department of

Environmental Quality (DEQ). Through its Environmental Impact Review process for federal projects, DEQ distributed scoping materials to appropriate state agencies. Owners of the private property on which the alternate water supply system would be located were also asked for comments. Agency responses are summarized as follows:

- Virginia Marine Resource Commission: Any jurisdictional impacts will be reviewed by VMRC during the Joint Permit Application process.
- Department of Environmental Quality: DEQ indicated that a Federal Consistency Determination is required per the Coastal Zone Management Act. Additionally, DEQ provided resource guidance information. In May 2013, DEQ concurred with the findings of the Federal Consistency Determination provided that construction activities are completed in accordance with appropriate enforceable local, state, and federal laws/regulations.
- Virginia Department of Historic Resources: DHR concurred with the Air Force determination that No Historic properties are located within the area of potential effect of the Proposed Action.
- Virginia Department of Health, Office of Drinking Water: Indicated that there are no apparent impacts and they have no additional scoping comments.
- U.S. Army Corp of Engineers: Indicated that when working near wetlands adhere to strict
 erosion and sediment control measures. In May 2013, the USACE indicated that no permit will be
 required from the Corps for the proposed work and noted that any permitting for impacts to the
 small offsite wetlands should be coordinated through DEQ and VMRC.
- U.S. Fish and Wildlife Service project review system Information, Planning, and Conservation System (IPaC): no federally proposed or listed endangered or threatened species are known to exist within the limits of the Proposed Action.

Conclusion

I have reviewed the EA and considered the comments received, and find that there will be no significant impacts to the natural environment, to cultural resources, or to the human environment resulting from this Proposed Action to construct and operate an alternate water supply system and booster station for JBLE-FE. Based on the evaluation of the environmental consequences in this EA, an environmental impact statement is not necessary.

THOMAS R. WETHERINGTON, Colonel Commander, 733 Mission Support Group

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EXECUTIVE SUMMARY

INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969, Federal agencies are required to consider the environmental consequences of their proposed actions. This Environmental Assessment (EA) has been prepared to evaluate potential environmental, cultural, transportation and socioeconomic effects associated with the proposed construction and operation of an alternate water supply system and booster station at Joint Base Langley-Eustis, Fort Eustis (hereinafter referred to as "JBLE-FE").

This EA documents the purpose and need, the alternatives developed, the site selection process and the analysis of potential environmental impacts considered to select a Preferred Alternative. Construction of the proposed project would begin once all studies and the design are complete and all permits are secured.

BACKGROUND AND SETTING

JBLE-FE is a joint military base aligned with Langley Air Force Base; the majority of military units are Army tenants. JBLE-FE was formed in 2010, when the Base Realignment and Closure Commission combined the two installations, (Langley Air Force Base and Fort Eustis). It is located in Newport News, Virginia, in the Tidewater Region. JBLE-FE employs over 12,000 military and civilian personnel.

PROPOSED ACTION

Old Dominion Utilities Service (ODUS) proposes to install a new water supply point (hereinafter called the "Proposed Action") for the Fort Eustis portion of JBLE. Construction of this project would include activities such as excavation, site grading, trenching and pipe installation.

The Proposed Action includes the following design features:

- Meter vault
- Backflow preventer
- Water booster station
- Approximately 2,450 linear feet of buried 12" pipe
- Crush and run maintenance access road; approximately 1,700 linear feet long and 12 feet wide

JBLE-FE has experienced water outages as a result of past water main breaks and during required maintenance on the connecting Newport News water main. Construction of the alternate water supply system is needed to meet the water demand for JBLE-FE. A secondary connection would provide redundant water service to account for potential future water outages, which would improve system reliability.

In order to meet demands, construction shall be completed, with the alternate water supply system fully operational, no later than September 30, 2013.



PURPOSE AND NEED

The purpose of the Proposed Action is to improve the reliability of the water supply system on JBLE-FE by providing a redundant water supply point for use in case of outages of the main system. Assuming average usage, full elevated storage tanks, and no alternate water source, future water outages would deplete the water supply at JBLE-FE in less than 24 hours.

ALTERNATIVES

The No Action Alternative, prescribed by the Council on Environmental Quality (CEQ), reflects the status quo and serves as a benchmark against which the other alternatives are evaluated. Under the No Action Alternative, JBLE-FE would forgo the proposed alternate water supply system and its related facilities.

Three alternatives were evaluated for the new alternate water supply system prior to selecting the alternative, which best met the purpose and need of the project (hereinafter referenced "Preferred Alternative"). Two of the options presented a number of obstacles in comparison with the Preferred Alternative, including access issues, increased impacts to natural resources, utility impacts, the need to repave the disturbed roadway and the potential for freezing. A detailed analysis of each alternative considered and the reasons for its elimination are discussed in the body of this EA.

The Preferred Alternative consists of 2,450 linear feet of buried 12-inch water main extending through a forested area on both JBLE-FE and adjacent private land. The 12-inch main would be tied into the existing 16-inch main on Enterprise Drive, which ties into a 30-inch main along Warwick Boulevard. This alternative presented the fewest adverse impacts to the surrounding environment and was the most feasible to construct. The Preferred Alternative is the shortest and least expensive of the alignments that were evaluated and it provides better access than the other options. It minimizes potential utility and wetland impacts and would not impact JBLE-FE traffic.

ENVIRONMENTAL CONSEQUENCES

This EA evaluates the potential short and long-term effects of the Proposed Action on land use, air quality, noise, aesthetics and visual resources, geology and soils, water resources, biological resources, cultural resources, socioeconomics, transportation, infrastructure and utilities, hazardous materials and environmental justice.

Implementation of the Proposed Action is expected to result in a combination of minor short and long-term adverse and beneficial effects to environmental resources and conditions. Table ES-1 summarizes the findings discussed in the body of this EA.



Table ES.1: Summary of Impacts

Resource	Proposed Action	No-Action
Land use	Minor Adverse Short-term Impacts	No Impacts
Air quality	Minor Adverse Short-term Impacts	No Impacts
Noise	Minor Adverse Short-term Impacts	No Impacts
Aesthetics and Visual Resources	Minor Adverse Short-term Impacts	No Impacts
Geology and Soils	Minor Adverse Short-term Impacts	No Impacts
Water Resources, including wetlands	Minor Adverse Long-term Impacts	No Impacts
Biological Resources	Minor Adverse Short- and Long-term Impacts	No Impacts
Cultural Resources	No Impacts	No Impacts
Socioeconomics	Minor Beneficial Short-term Impacts	No Impacts
Transportation	Minor Adverse Short-term Impacts	No Impacts
Solid Waste and Utilities	Minor Adverse Short-term Impacts	No Impacts
Hazardous Materials	No Impacts	No Impacts
Environmental Justice	No Impacts	No Impacts



1.0 PURPOSE, NEED, AND SCOPE

1.1 Introduction and Background

Joint Base Langley-Eustis, Fort Eustis (JBLE-FE) is a joint military base aligned with Langley Air Force Base; the majority of military units are Army tenants. JBLE-FE was formed in 2010, when the Base Realignment and Closure Commission combined Langley Air Force Base and Fort Eustis. JBLE-FE is bound by the James River to the west and the Warwick River to the east (see **Figure 1**). It is contiguous to Newport News, Virginia, and employs over 12,000 military and civilian personnel.

Old Dominion Utility Service (ODUS) owns and operates the water and sanitary sewer facilities at JBLE-FE. The existing water distribution system consists of approximately 50 miles of pipe, a water booster pumping station and two elevated storage tanks. The base is currently fed through a single 14-inch water line which extends from Warwick Boulevard down Washington Boulevard to the existing water booster station in Building 6.

The current JBLE-FE water distribution system operates on the levels of two elevated tanks. These tanks are filled by a water booster station pumping from the lower pressure south zone of the Lee Hall Water Treatment Plant (WTP). The typical discharge pressure of the water booster pump station is between 75 and 80 pounds per square inch (psi). The proposed alternate water supply system would provide at least this much pressure in order to fill the tanks.

Newport News Waterworks (NNWW) operates the Lee Hall WTP, located approximately 0.7 miles northeast of Alternative 1 and 1.5 miles southeast of Alternative 2. Similar to the existing water system at JBLE-FE, the alternate water supply system would be fed by the Lee Hall WTP.

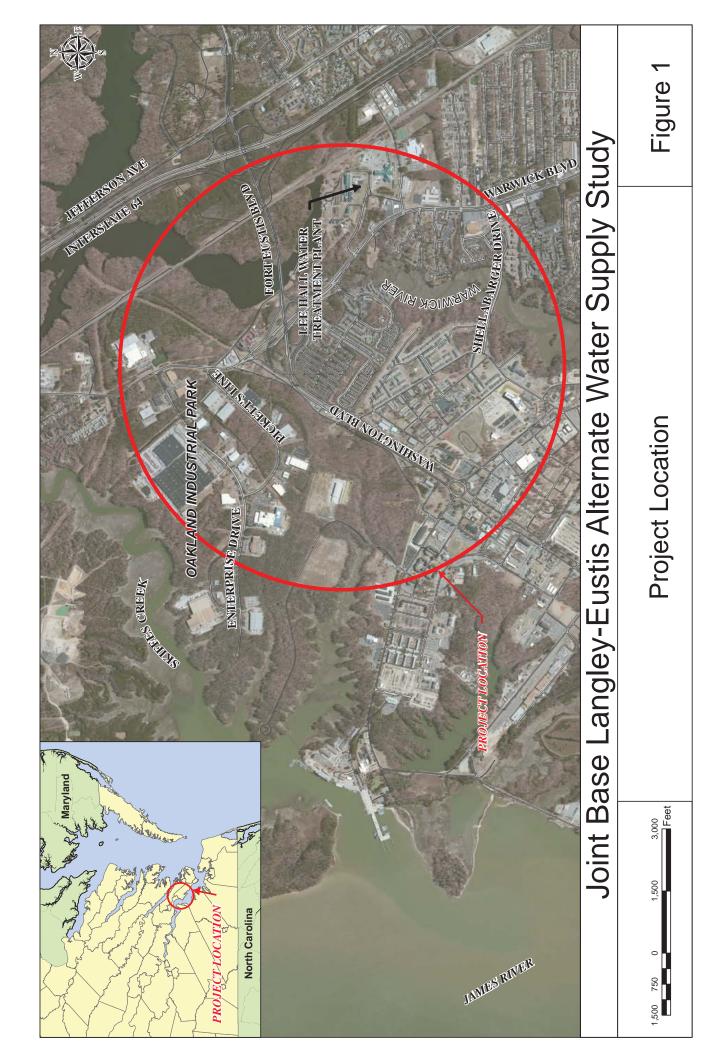
1.2 Purpose and Need

There have been previous water outages on JBLE-FE due to a water main break and required maintenance on the Newport News water line. Using average demands and assuming full elevated storage tanks, the existing water system would remain operational for less than 24 hours. The purpose of the Proposed Action is to create a secondary water connection, thereby providing redundancy and improving system reliability during any future outages to the main system.

1.3 Scope of the Environmental Assessment

In accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations issued by the Council on Environmental Quality (CEQ), and in accordance with the Air Force Environmental Impact Analysis Process (32 CFR Part 989), this Environmental Assessment (EA) identifies, documents and evaluates the environmental effects likely to occur as a result of the Proposed Action. An interdisciplinary team of scientists, engineers, planners, archaeologists and military technicians reviewed





the findings discussed in this document, which acts to inform Federal agencies and the public of any direct environmental consequences likely to occur as a result of implementing the Proposed Action. This document also includes the development of alternatives, analyses of any secondary (or indirect) effects and a discussion of the cumulative effects of other known or foreseeable actions.

The environmental effects include those related to construction and operation of the Proposed Action. In considering environmental concerns, the US Air Force (USAF) is guided by relevant state and federal statutes as well as by Executive Orders (EO) that establish standards and provide guidance on environmental and natural resources management and planning.

1.4 Public Involvement and Agency Coordination

The Air Force encourages public participation in the NEPA process. Documents about this Proposed Action are made available to agencies, organizations, and members of the general public with an interest in the Proposed Action so that they may review and comment on decisions as they are made.

Coordination with Federal and State agencies to solicit comments related to their corresponding areas of jurisdiction, and to obtain concurrence with the initial findings for the Proposed Action, was initiated in January 2013. Agencies contacted include the US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE), US Environmental Protection Agency (EPA), US Department of Agriculture Natural Resources Conservation Service, Newport News Department of Planning, NNWW, the Virginia Department of Historic Resources and the Virginia Department of Environmental Quality (DEQ). Through its Environmental Impact Review process for federal projects, DEQ distributed scoping materials to appropriate state agencies. High Liner Foods Incorporated, owners of the private property on which a portion of the alternate water supply system would be located were also coordinated with. Copies of the coordination letters and mailing list, along with agency responses and public comments, are located in **Appendix A**.

Public participation with respect to this EA is guided by 32 CFR Part 989. If the EA concludes that the Proposed Action would not result in significant environmental effects, the Air Force may issue a draft Finding of No Significant Impact (FNSI). The EA and draft FNSI were made available to the public for review and comment for 30 days beginning upon the publication of the notice of availability in the *Daily Press* (Newport News, VA) on March 19, 2013. At the end of the 30-day public review period, the Air Force will consider any comment submitted on the Proposed Action. As appropriate, they may then choose to execute the FNSI and continue with implementation of the Proposed Action. If it is determined that the implementation of the Proposed Action would have significant impacts, the Air Force would either publish a notice of intent to prepare an environmental impact statement in the *Federal Register*, commit to mitigation actions to reduce impacts below levels of significance, or cancel the action.



2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action consists of the construction of a 12-inch water main on JBLE-FE. It would include the following design features:

- Meter vault
- Backflow preventer
- Water booster station
- Approximately 2,450 linear feet of buried 12-inch pipe
- Crush and run access roadway for maintenance; approximately 1,700 feet long and 12 feet wide

The 12-inch water main is needed to provide a redundant water supply point in case of an outage in the existing system. With normal water demand, and assuming full water tanks, the existing system would remain operational for less than 24 hours in the case of an outage. Previous outages have occurred as a result of water main breaks and due to scheduled maintenance on the Newport News system.

Hydraulic modeling was used to evaluate pressures in an elevated storage tank for four different scenarios. The model evaluated the existing system, the Preferred Alternative connections with and without a Pressure Reducing Valve (PRV)/Control Valve, and the Preferred Alternative connection with a PRV, Booster Station and Control Valve.

During the scenario without a PRV/Control Valve, the elevated tank completely filled and would not drain. This caused system pressures to increase well above the 75 psi threshold for large parts of the system. The system high pressure was 91 psi. If the tanks are unable to cycle, water age would become an issue and increased system pressures could lead to the development of leaks in older sections of pipes.

The application of a PRV is a common method of achieving a steady pressure feed into a pipe network that operates at a lower pressure than its supply system. The desire of ODUS to continue utilizing the elevated tanks to supply the required demand means that these pressures would have to be regulated.

With the PRV set at 77.5 psi (to match the pressure provided by the booster station), the elevated tank is able to fill. However, it takes an additional 3.5 hrs. The increased cycle time would present an issue for water age and cause the system's flushing hydrants to operate more frequently. A water booster station with pumps able to match existing tank cycle times would prevent any additional maintenance and operations work as a result of the new connection.

2.2 No Action Alternative

The No Action Alternative is the continuation of existing conditions without implementation of the Proposed Action. Prescribed by CEQ and Air Force regulations, the No Action Alternative serves as a baseline against which the impacts of the Proposed Action and alternatives can be evaluated. Under the



No Action Alternative, JBLE-FE would forgo the proposed alternate water supply system and would have limited operational time in the case of an outage in the existing system.

2.3 Alternative Sites Considered

For Proposed Actions that require the preparation of an EA, the CEQ regulations, NEPA, and Air Force guidance and policy require that appropriate alternatives for the Proposed Action be described and evaluated. A reasonable range of alternatives that meet the underlying purpose and need for the Proposed Action should be analyzed for their environmental impacts in order to support a fully informed decision. An EA must include an evaluation of the No Action Alternative as a reference for the comparison of potential environmental impacts associated with the Proposed Action. Additionally, the EA should identify alternatives eliminated from detailed analysis and indicate the reasons for their elimination.

Two primary alternatives for the Proposed Action were identified and evaluated. Alternative 1, on Shellabarger Drive, was later divided into two options. Alternative 2 is in the Oakland Industrial Park.

Shellabarger Drive (Alternative 1):

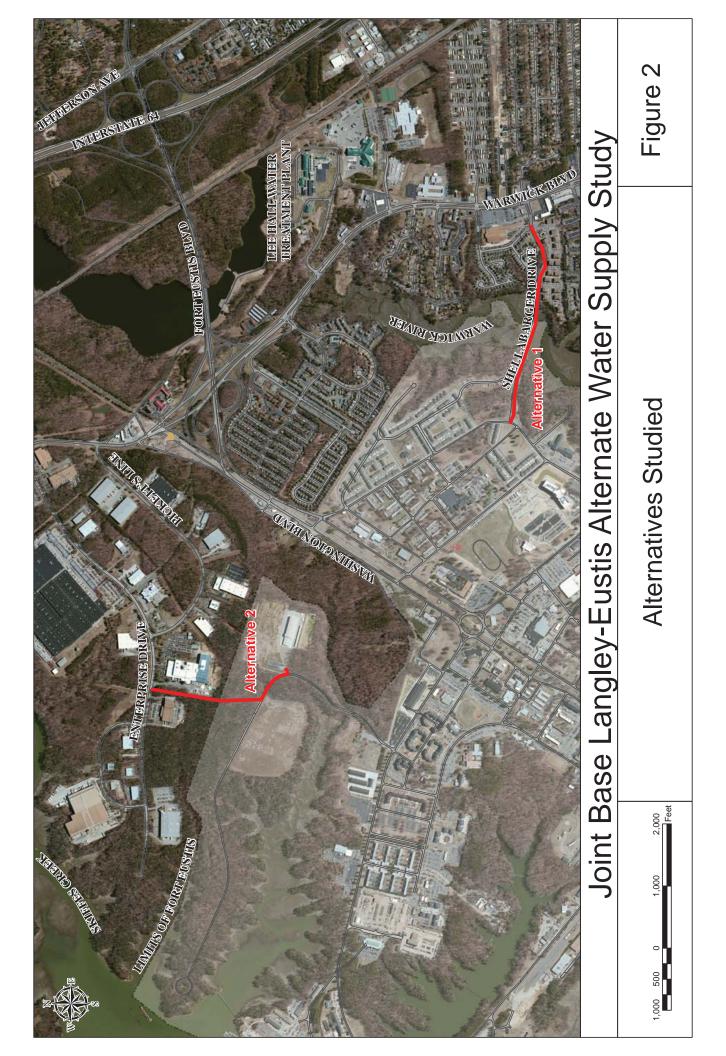
In 2005, the USACE designed a second entrance to JBLE-FE, crossing the Warwick River along Shellabarger Drive. The project extended Shellabarger drive 3,700 feet from Warwick Boulevard to Madison Avenue. The 1,100 linear foot bridge across the Warwick River was designed and built with 14-inch diameter openings in each support to accommodate a waterline. This alignment would tie into the existing 12-inch main in Shellabarger Drive and extend 3,650 linear feet to tie into the existing JBLE-FE System at the corner of Madison Avenue and Lincoln Street. Due to the low system pressures, a water booster station would be required for this alternative. The alignment for this alternative is depicted on **Figure 2**. The existing 8-inch main in Madison Avenue would be replaced with a 12-inch main to improve flow to the elevated storage tanks.

Alternative 1 has been divided into two options. Alternative 1A would attach the pipe to the existing bridge. Alternative 1B would utilize a horizontal directional drill (HDD) to cross the Warwick River. The use of a HDD to cross the river would avoid disturbing the wetlands adjacent to the river.

Oakland Industrial Park (Alternative 2):

Oakland Industrial Park is located along Warwick Boulevard, north of the primary entrance to JBLE-FE. The Industrial Park's water system consists of a primary 16-inch main extending down Enterprise Drive, with a secondary 12-inch loop along Picketts Line. Both the 16-inch and 12-inch mains are tied into the 30-inch main along Warwick Boulevard. The 30-inch main provides water at a higher pressure than the majority of the Newport News system in order to service multiple customers in James City County. The proposed alignment would tie into the existing 16-inch main in Enterprise Drive. It would then extend 1,100 feet to the south, along the boundary between the High Liner Seafood property (190 Enterprise Drive) and the Newport News Industrial Corporation (NNI) property (182 Enterprise Drive), heading toward the JBLE-FE property line. On JBLE-FE, the water main would continue for approximately 660 feet south to an unnamed access drive and then turn east toward the Tactical Equipment Maintenance Facility (TEMF). The proposed alignment would extend approximately 690 feet east along the unnamed





access road and connect into two existing 8-inch mains currently serving the Tactical Equipment Maintenance Facility (TEMF). Alternative 2 is shown on **Figure 2**.

Both Alternatives would include a meter vault and a back flow preventer.

2.4 Site Selection Process

The site selection process attempted to identify the most feasible, cost effective, minimally invasive, and least environmentally-sensitive location for the design features described above. The following are the site selection criteria used to evaluate the feasibility of each alternative location:

Impacts to the Public

- Considered the extent of disruption to the public during and after construction.
- Routes within easements would be preferred to those in roadway rights-of-way, because there would be fewer public impacts.

Easements

- Considered the number and size of easements that would be required.
- Routes with fewer easements would be preferred to those with more.

Operations and Maintenance (O&M)

- Considered access for operations and maintenance after construction.
- Alignments that allow for ease of access would be preferred to those in remote easement areas.
- Routes in roadways with lower speed limits and lower daily traffic counts would be preferred to those with higher speed limits and higher daily traffic counts.

Environmental Impacts

- Considered the effects of the project on the natural environment.
- Alignments that minimize environmental impacts would be preferred to those in more environmentally sensitive areas.
- Routes that minimize permitting and mitigation requirements would be preferred to those with greater requirements.

Constructability

- Considered factors that affect construction rates and costs, such as access, clearing, wetlands, traffic control, drainage crossings and use of easements versus putting pipes in pavement.
- Routes with fewer impediments to construction would be preferred to those with more.
- Routes with lower costs would be preferred to those with higher costs.



Utility Conflicts

- Considered impacts due to conflicts with existing and future utilities.
- Routes with fewer potential utility conflicts would be preferred to those with more.

Costs

- Considered the estimated cost of construction.
- Cost estimates were on a linear foot basis, not total cost.

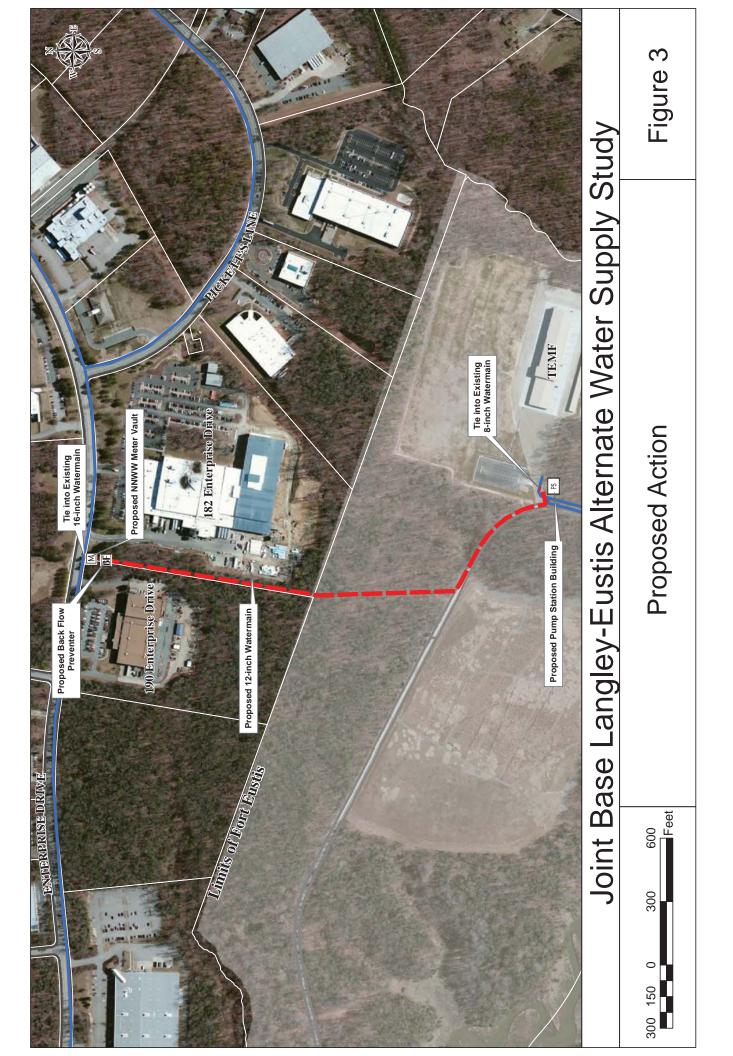
Each Alternative was assigned a grade of 1 to 5 for each evaluation factor, with 5 being the best and 1 being the worst. While this scoring system is subjective, it was useful in providing a quantitative comparison between the alternatives. **Table 2.1** summarizes the scores for each alternative.

Table 2.1: Alternative Decision Matrix

Criterion	Alternative			
Criterion	1A	1B	2	
Public/Traffic Impacts	3	3	5	
Property Impacts/ Easements	5	5	4	
Ease of O&M	5	3	5	
Environmental Impacts	2	3	4	
Constructability	3	4	5	
Utility Conflicts	3	3	5	
Cost	3	3	4	
Total Score	24	24	32	

Alternative 2 received the highest score and is the least expensive alternative due to its shorter length and lack of a river crossing. Based on the results of the Alternative Decision Matrix, Alternative 2, in the Oakland Industrial Park, was selected as the Preferred Alternative. See **Figure 3**. A Conceptual Plan Set, including maps of the project site and piping system, are included in **Appendix B**.





3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

The information provided in this section of the EA serves as a point of reference for understanding potential impacts resulting from the construction and operation of the proposed new infrastructure in the project area. The project study area is defined as an area approximately 50 feet on either side of the centerline of the Proposed Action. The Preferred Alternative would span approximately 2,450 feet, with approximately 1,350 feet on JBLE-FE, and the remaining 1,100 feet on adjacent private property owned by High Liner Foods Incorporated.

Table 3.1 provides a summary of the potential environmental changes associated with both the Preferred and No Action alternatives. Under the No Action Alternative, JBLE-FE would forgo construction of the proposed alternate water supply system and there would be no changes to any environmental assets. The affected environment and anticipated impacts associated with the Proposed Action are further detailed in the sections that follow.

Table 3.1: Summary of Potential Environmental and Socioeconomic Consequences

Resource	Preferred Alternative	No-Action
Land use	Minor Adverse Short-term impacts	No Impacts
Air quality	Minor Adverse Short- term Impacts	No Impacts
Noise	Minor Adverse Short-term Impacts	No Impacts
Aesthetics and Visual Resources	Minor Adverse Short-term Impacts	No Impacts
Geology and Soils	Minor Adverse Short-term Impacts	No Impacts
Wetlands	Minor Adverse Long-term Impacts	No Impacts
Water Resources	No Impacts	No Impacts
Biological Resources	Minor Adverse Short-term and Long- term Impacts No Impacts	
Cultural Resources	No Impacts	No Impacts
Socioeconomics	Minor Beneficial Short-term Impacts	No Impacts
Transportation	Minor Adverse Short-term Impacts	No Impacts
Solid Waste and Utilities	Minor Adverse Short-term Impacts	No Impacts
Hazardous Materials	No Impacts	No Impacts
Environmental Justice	No Impacts	No Impacts

3.2 Land Use

3.2.1 Affected Environment

This section addresses existing and proposed land use patterns within JBLE-FE and the surrounding vicinity, along with the areas associated with the Preferred Alternative. Current land use at JBLE-FE



includes military training (dominant land use), housing, commercial ventures, administrative facilities, recreational areas and open space. Similar to other military installations, JBLE-FE has distinct zones based on dominant land use. It is surrounded by residential areas, commercial centers, light industrial use and open space. According to Newport News' *Framework for the Future 2030*¹, the Proposed Action would be in an area zoned as "Heavy Industrial" on the private land along the south side of Enterprise Drive and as "Government" on the JBLE-FE property south of the private parcels. **Table 3.2** presents a summary of total acres of land disturbance for each alternative evaluated:

	Alternative			
Design Feature		Preferred		
	No Action		JBLE-FE Property	
Booster Station	0	0	0.14	
Alternate Water Supply Line	0	0.20	0.35	
Maintenance Access Road	0	0.30	0.19	
Total	0	1.18	·	

Table 3.2: Summary of Land Disturbance (acres)

In accordance with the Farmland Protection Policy Act, a Farmland Conversion Impact Rating Form was completed for the Proposed Action. This form is intended to evaluate impacts of proposed projects on Prime Farmland and Statewide Important or Local Important Farmland. One of the primary uses of land at Fort Eustis is for military training. The Proposed Action encompasses the installation of the water main and access road in Training Area 2 of JBLE-FE. This training area consists of 77 acres and is used by military units to conduct tactical bivouac, land navigation, small unit tactics and vehicle access training.

3.2.2 Environmental Consequences

Impacts to land use as a result of implementing the Proposed Action were evaluated based on potential incompatibility with existing, proposed, or future land use designations, as well as conflicts with zoning, adjacent land use and other planning regulations. The Preferred Alternative would require permanent easements on approximately 0.50 acres of private property, all classified as 'Heavy Industrial' land use. Based on the current use of land that would be impacted by the Proposed Action, there would be no zoning or development conflicts. Furthermore, the Preferred Alternative project area is consistent with the existing land use designation. **Table 3.3** summarizes the permanent easements associated with each alternative.

¹ Framework for the Future 2030 is a planning document utilized by the City of Newport News, neither this document nor the City of Newport News set the land use type for JBLE-FE.



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Table 3.3: Alternate Water Supply System Permanent Easements (acres)

	No Action Alternative		Preferred Alternative	
Feature	Private Land	JBLE-FE	Private Land	JBLE-FE
Alternate Water Supply Line	0	0	0.20	0
Maintenance Access Road	0	0	0.30	0
Total Easements Required	0	0	0.50	0

According to the Natural Resources Conservation Service, there is no Prime Farmland, Statewide Important Farmland, or Local Important Farmland in the study area. See **Appendix A**. Temporary closure of Training Area 2 to training activities would occur during construction. The expected duration of this impact would be 30 days. Additionally, once the project is completed, the pipe would be buried; the access road would not impact future training activities since it is only intended to be used for the operations and maintenance of the Proposed Action and not for entrance into JBLE-FE. The total impacted area out of the 77 acres within Training Area 2 would be approximately 0.32 acres.

3.3 Air Quality

3.3.1 Affected Environment

Air quality is dependent upon a combination of factors, including the type and amount of pollutants emitted, the size and topography of the air basin and prevailing meteorological conditions. The significance of the pollutant concentration is determined by comparing an area's conditions with federal and state ambient air quality standards. Air quality is administered by the Clean Air Act (CAA) of 1972 (42 USC 85) and is regulated under 40 CFR Part 50, which requires EPA to establish primary and secondary National Ambient Air Quality Standards (NAAQS) for the protection of public health and the environment. NAAQS set the acceptable concentration levels for six criteria area air pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), ozone (O₃), nitrogen dioxide (NO₂), particulate matter (PM) less than 10 microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}), and lead (Pb). Pollutant emissions and air quality in Virginia are monitored by DEQ and EPA Region 3. Where criteria pollutants exceed established NAAQS, areas are designated as nonattainment or maintenance zones² and a plan³ must be implemented to improve the overall existing air quality in the designated Air Quality Control Regions (AOCR).

Federal actions occurring in nonattainment areas or maintenance areas require an analysis to determine whether or not the proposed action would be consistent with the overall air quality attainment goals established where the proposed project would occur. A general conformity determination is required to show that the proposed project would not exceed the designated threshold (*de minimis*) levels for criteria pollutants with established NAAQS goals.

³ Typically a State Implementation Plan (SIP), 40 CFR §51.



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² Air Quality Control Regions and their respective air quality attainment status are listed in 40 CFR §81.

JBLE-FE is located in the Hampton Roads Intrastate AQCR, as designated in 40 CFR 81.93. According to 40 CFR 81.321, the Hampton Roads Intrastate AQCR is classified as in attainment for all criteria pollutants. However, based on 1997 standards, it was designated as a nonattainment maintenance area for 8-hour ozone. After several consecutive years of improvements, the Hampton Roads Intrastate AQCR was determined to be in attainment for 8-hour ozone in June 2007. Since then, Hampton Roads has been designated as a maintenance area for 8-hour ozone.

3.3.2 Environmental Consequences

Air quality impacts resulting from the proposed project would be limited to the intermittent use of a backup generator for the pump station as well as pollutant emissions associated with construction activities, including airborne dust from ground disturbance, operations, combustion byproducts from construction equipment and worker travel during construction. The amount of emissions generated during the construction and subsequent operation of the alternative water supply would be minor and would not substantially affect regional air quality in or around Newport News and the Hampton Roads Intrastate AQCR.

Due to its location within the Hampton Roads Intrastate AQCR, the study area is in attainment for all area criteria pollutants and is in a designated maintenance area for 8-hour ozone. Therefore, with the exception of ozone emissions, these pollutants are not subject to a review of the project's conformity with the CAA or any established State Implementation Plans (SIP) (see **Appendix C**). An analysis of the potential for ozone emissions has been conducted and is summarized in **Table 3.4**. Because ozone forms from other emissions, the analysis focuses on ozone precursors, including volatile organic compounds (VOCs), sulfur oxides (SOx), and nitrogen oxides (NOx).

Table 3.4: Comparison of Construction and Operation Emissions to GeneralConformity Rule *De Minimis* Thresholds

Activity	Emissions (tons/year)			
Activity	VOCs	SOx	NOx	
2013 Construction Emissions	0.0085	.0008	0.545	
Annual Operation Emissions	0	0	0	
De Minimis Thresholds ¹	50	100	100	
Threshold Exceeded?	No	No	No	

¹EPA threshold for maintenance areas (40 CRF 93§153).

The analysis concludes that the proposed project would remain below the EPA's *de minimis* threshold for an 8-hour ozone maintenance area and would be consistent with the overall air quality attainment goals established for the proposed project study area.



3.4 Noise

3.4.1 Affected Environment

Noise is defined as unwanted sound that interferes with normal activities in a way that reduces the quality of the environment or is otherwise intrusive. Sounds can be intermittent or continuous. The two primary types of sound sources are stationary and transient. Stationary sources are immobile sources usually associated with a specific location, such as the noise generated at a construction site. Transient sound sources, such as vehicles or aircraft, move through the area. The loudness of sound as heard by the human ear is measured on the A-weighted decibel (dBA) scale. Examples can be found in **Table 3.5.**

Source **Decibel Level Exposure Concern** Soft Whisper 30 Average Home 50 Normal, safe levels Conversational Speech 65 75 Highway Traffic Average Factory 80-90 May affect hearing in some individuals Automobile Horn 120 Jet Plane 140 Noises at or over 140 dBA may cause pain **Gunshot Blast** 140

Table 3.5: Common Noise Levels

Source: EPA Pamphlet, "Noise and Your Hearing," 1986.

3.4.2 Environmental Consequences

Minor short-term adverse noise impacts are expected in the Project Area. Short-term increases in noise may result from the delivery and use of construction equipment. **Table 3.6** provides a representation of noise levels associated with new construction. With multiple pieces of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within 400 to 800 feet of active construction sites. Limiting construction activities to normal working hours and employing noise-control methods to the greatest extent possible would mitigate noise impacts during the construction phase.

Table 3.6: Typical Construction Equipment Noise Levels

Type of Equipment	dBA (at 50 feet)
Bulldozer	80
Backhoe/Bobcat	72-93
Jack hammer	81-98
Crane	75-77
Pick-up truck	83-94
Dump truck	83-94



No long-term increases in the overall noise environment are anticipated from implementation of the Proposed Action.

3.5 Aesthetics and Visual Resources

3.5.1 Affected Environment

Visual resources include the natural and man-made features that give a location its aesthetic qualities. These features form the overall impression a viewer obtains of an area, or its landscape character.

The Proposed Action is located in a mature mixed hardwood forest. The portion that is on private land is located near the boundary between two industrial facilities. Approximately half of the portion that is on JBLE-FE is adjacent to an unpaved access road. The remainder is within the forest.

3.5.2 Environmental Consequences

The proposed pipe would be concealed entirely underground and would cause only temporary, minor visual impacts during the construction process. The access road would be 12 feet wide, spanning the length of the project. While the road itself would be a new visual element, the surrounding forest would be left intact, largely hiding the road from view. The proposed water booster station would be adjacent to the newly-constructed Tactical Equipment Maintenance Facility (TEMF), and would not change the visual character of the area. See **Figure 3**.

3.6 Geology and Soils

Geology and soils are those aspects of the natural environment related to the earth. Some features include the presence/availability of mineral resources, soil condition and capabilities, potential for natural hazards, topography, physiology and geologic units and their structure.

3.6.1 Affected Environment

JBLE-FE lies within the Atlantic Coastal Plain Physiographic province. The Coastal Plain is underlain by a thick wedge of sediments that increases in thickness from the fall line to the continental shelf. These sediments rest on an eroded surface of Precambrian to Cenozoic rock. Sediments in the study area are from the Quaternary era.

The topography around JBLE-FE is generally flat, with approximately 60 feet of topographic relief. The greatest slopes occur along stream corridors. The study area is approximately 30 feet above sea level and the topography is flat.

The majority of the land in the project area is suitable for building; it is primarily mapped as Chickahominy-Urban land complex (8), Newflat-Urban land complex (17), and Peawick-Urban land complex (19) soil. Each of these soils is prevalent in urban areas, and each has silt loam or loam texture in the upper 6 inches. Deeper layers consist of clay, silty clay, or silty clay loam. None of these soils are classified as Prime Farmland soils.



3.6.2 Environmental Consequences

Minor short-term adverse effects on soils are expected with implementation of the Proposed Action. Installation of the pipe and construction of the maintenance access road and water booster station would involve the removal of vegetation and disturbance of soils to the depth⁴ required for installation or construction. A Virginia Stormwater Management Program Permit would be obtained from the Virginia Department of Conservation and Recreation (DCR) for the Proposed Action. This permit would cover erosion and sediment control, stormwater management, and stormwater pollution prevention. Best management practices (BMPs) would be incorporated and maintained as part of the Proposed Action. BMPs at construction sites typically consist of various erosion and sediment control measures. Temporary measures such as silt fences or straw bales may be placed around the perimeter to control erosion until pipe installation and construction of the access road and water booster station are complete, and the soil has been stabilized.

Disturbed areas would be fully stabilized and re-vegetated with non-invasive grasses following construction activities. Re-seeding will adhere to DCR requirements for sediment control. No adverse effects are expected to impact site specific geology or topography as a result of implementing the Proposed Action.

3.7 Water Resources

This section describes the existing water resources that may be impacted as a result of implementing the Proposed Action, including strategies to avoid and minimize those impacts.

3.7.1 Affected Environment

Surface Water

JBLE-FE is located in the Lower James River drainage basin (Hydrologic Unit Code 02080206). The James River drains into the Chesapeake Bay, which drains into the Atlantic Ocean. There are ten named waterways on or bordering JBLE-FE, along with numerous intermittent channels. Bailey Creek flows into Skiffes Creek, which flows into the James River. Jail Creek, Morrisons Creek, Blows Creek, and Fort Creek also discharge into the James River. Milstead Creek, Island Creek, and Butlers Gut connect the Warwick River to the James River. JBLE-FE contains approximately 21.6 miles of open tidal shoreline along the James and Warwick Rivers and Skiffes Creek.

In November 2012 a field survey was conducted on the private property within the limits of the Proposed Action. The survey included a search for intermittent or perennial streams, but none were identified within or immediately adjacent to the Proposed Action. However, there is a perennial stream immediately adjacent to the Proposed Action within Training Area 2. The perennial stream runs beside and under (through a culvert system) the Proposed Action's route along the main Training Area 2 Maneuver Trail.

⁴ Typical depth of installation is 3 ft of cover with a 1 ft pipe and 6 inches of stone bedding (about 5 ft). Pipeline and booster station installation does not exceed 8 ft.



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Groundwater

Potable water in the study area is purchased from NNWW. The primary sources are the Chickahominy River and six deep wells (between 505 and 1,131 feet) in the Lee Hall area. The wells draw brackish water from the Potomac Aquifer. The Chickahominy River has a relatively high susceptibility to contamination, but the wells have low susceptibility. NNWW's water system complies with standards in the *Safe Drinking Water Act* (SDWA) and with the Commonwealth of Virginia's standards, which mirror those of the SDWA.

Wetlands

JBLE-FE has approximately 3,000 acres of wetland resources across the base. Many of these wetlands are situated in the floodplains of the ten named waterways on the installation. Nearly 100% of the installation has been delineated by the US Army Corps of Engineers Norfolk District excluding most of the impact area⁵ which is not associated with the Proposed Action. USACE confirmation for delineations performed on JBLE-FE was originally received in September 2008 with additional delineation work completed in 2012. The wetlands data for the portion of the proposed action on Fort Eustis property remains valid.

Information concerning the potential nature and extent of wetlands within and adjacent to the Proposed Action was obtained by performing routine wetlands delineations of the study area, using the USACE's 1987 Wetlands Delineation Manual. The manual's routine on-site determination method was used. Wetland delineations involve an assessment of existing conditions, an inventory of the dominant vegetative species, an assessment of the hydrological influences of an area and an evaluation of the soil profile.

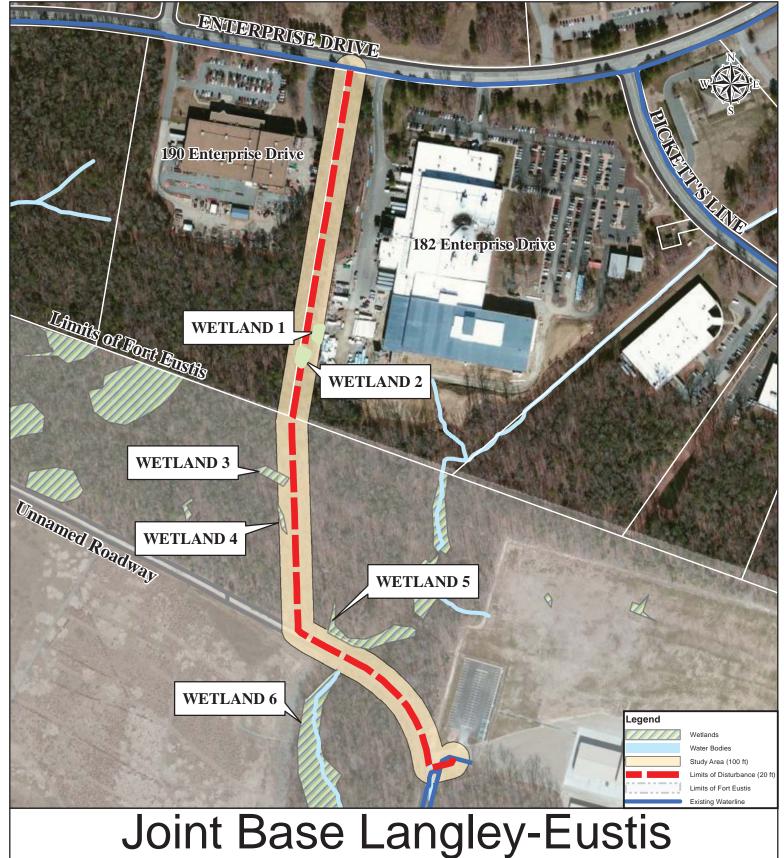
In November 2012, a wetland delineation was performed on the privately-owned property in the study area, subject to regulation under Section 404 of the Clean Water Act (CWA). The USACE has provided several regional supplements for the 1987 Wetlands Delineation Manual, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0) was used in this delineation. Results of the delineation are summarized in a December 2012 memorandum see **Appendix D**. The USACE preformed a site confirmation for the wetland delineation on private property on May 1, 2013. See **Appendix A** for USACE field determination coordination letter.

Two wetlands were identified on the private land within the limits of the Proposed Action. Both were Palustrine Emergent (PEM), with the vegetation dominated by cattails (*Typha latifolia*), soft rush (*Juncus effusus*), and woolgrass (*Scirpus cyperinus*). Four Palustrine Forested (PFO) wetlands were found on the JBLE-FE land within or near the limits of the Proposed Action. The dominant wetland vegetation on this part of the base includes cherrybark oak (*Quercus pagoda*), green ash (*Fraxinus pennsylvanica*), chain

⁵ The Munitions and Explosives of Concern Hazard Assessment (MEC HA) defines a target area as "Areas at which munitions fire was directed." Those areas within the designated range boundaries which could be used as a target area or which could reasonably be used as a munitions fire area. With the exception of the range safety fans all areas within the designated range limit would be considered impact areas."



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Joint Base Langley-Eustis Alternate Water Supply Study

0 150 300 600 Feet Environmental Resources

Figure 4

fern (*Woodwardia* spp.), and soft rush. No impacts to wetlands on the installation are expected based on avoidance. Wetlands located within or near the limits of the Proposed Action are shown on **Figure 4**.

Floodplains

EO 11988, *Floodplain Management*, requires federal agencies to consider the risks and potential impacts of locating projects within floodplains. Floodplains are typically described as areas likely to be inundated by a particular flood. For example an area that has a one percent chance of flooding in a one-year span is in the 500-year floodplain.

The 1986 Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map that includes the study area shows that the Proposed Action would be located in Flood Zone C. This zone is subject to infrequent flooding, with floods occurring, on average, less than once every 500 years. FEMA does not have any regulatory requirements for construction in Flood Zone C because of the low flood risk.

Coastal Zone

The study area is entirely within Virginia's Coastal Zone Management (CZM) Program area, which includes the Chesapeake Bay. Established by an EO, the CZM Program is a network of state laws and policies designed to protect coastal and marine estuaries. DEQ regulates activities proposed within Virginia's CZM area through federal consistency requirements. Additionally, EO 13508 "recognizes the Chesapeake Bay as a national treasure and calls on the federal government to lead a renewed effort to restore and protect the nation's largest estuary and its watershed." Federal agencies are required to determine whether their activities are reasonably likely to affect any coastal use or resource and to conduct such activities in a manner consistent to the maximum extent practicable with the goals and objectives of EO 13508 and Virginia's CZM Program.

3.7.2 Environmental Consequences

Surface Water

Construction impacts associated with the Proposed Action could have a short-term effect on water resources by increasing storm water runoff from the site and carrying sediment and contamination loads into nearby waters during heavy rain. Construction activities would comply with the *Virginia Erosion* and Sediment Control Regulations and the Virginia Stormwater Management Regulations to avoid or minimize erosion.

No streams were identified on private land during field visits to the area within the limits of the Proposed Action. However, a perennial stream is located immediately adjacent to the study area within Training Area 2. The perennial stream runs beside and under (through a culvert system) the Proposed Action's route along the main Training Area 2 Maneuver Trail. There will be no direct impact to the perennial stream in terms of mechanical alteration however; proper erosion and sediment control and spill prevention measures will be part of any permit from DCR.

The Proposed Action would add approximately 0.52 acres of new impervious surfaces to the site, as shown in **Table 3.7**. Grassed swales would be utilized to address the additional impervious surface. No long-term impacts to surface water are likely to occur from on-going operations.



Table 3.7: Summary of New Impervious Surfaces

New Impervious Surface (Acres)				
	Alternative			
Feature		Preferred		
	No Action	Private Property	JBLE-FE Property	
Maintenance Access Road	0	0.3	0.19	
Pump Station	0	0	0.03	
Total	0	0.52		

Groundwater

Construction activities such as fueling equipment or fluids leaked from equipment have the potential to occur and could result in groundwater contamination. BMP's would be used to prevent spills or leaks for vehicles, equipment, and containers. Spills or discharges of fuel, hydraulics, or other hazardous materials would be reported immediately by calling Fire and Emergency Services and responded to in accordance with the Fort Eustis Integrated Contingency Plan and the Fort Eustis Spill Prevention, Control and Countermeasures Plan.

Wetlands

Construction of the Proposed Action would impact approximately 0.003 acres of PEM wetlands located on private property. No wetlands on JBLE-FE property will be impacted (see **Figure 4**). As shown in **Table 3.8**, the impacts would be permanent.

Table 3.8: Wetland Impacts

Wetland Type	Wetlend	Acres in	Acres Impacted			
	the Project	No Action Alternative		Preferred Alternative		
	**	Area	Temporary	Permanent	Temporary	Permanent
Private Property Wetland 1	PEM	0.002	0	0	0	0
Private Property Wetland 2	PEM	0.003	0	0	0	0.003
JBLE-FE Property Wetland 3	PFO	0.02	0	0	0	0
JBLE-FE Property Wetland 4	PFO	0.02	0	0	0	0
JBLE-FE Property Wetland 5	PFO	0.02	0	0	0	0



Wetland Type	A	Acres in the Project Area	Acres Impacted			
			No Action Alternative		Preferred Alternative	
	Туре		Temporary	Permanent	Temporary	Permanent
JBLE-FE Property Wetland 6	PFO	0.0005	0	0	0	0
Total		0.07	0	0	0	0.003

Proposed impacts to two small isolated wetlands may require a Joint Permit Application be submitted to the regulatory agencies. No mitigation is anticipated to be required for this project due to minimal size of the impacts.

Floodplains

Because the Preferred Alternative is in an area mapped as Zone C by FEMA, there would be no impacts to floodplains due to the project.

Coastal Zone

To abide by the policies set forth within the Virginia CZM Program, a consistency determination has been completed and was submitted in March 2013to DEQ for review as part of this draft EA. The documentation shows that impacts to wetlands are being minimized to the maximum extent possible and that there would be no impacts to floodplains. In May 2013, DEQ concurred that the proposal is consistent with the CZM program. Furthermore, based on the type of project and provided that construction activities are completed in accordance with appropriate enforceable local, state, and federal laws/regulations; the project will be consistent with the goals and objectives of Virginia's CZM program and the intent of EO 13508. As the project moves forward and as outlined in DEQ's response, coordination with appropriate resource agencies will continue as necessary, see **Appendix E**.

3.8 Biological Resources

This section describes native or naturalized vegetation and wildlife in the project vicinity, and the habitats in which they occur.

3.8.1 Affected Environment

Vegetation

Extensive development near the Proposed Action has resulted in few areas retaining their native vegetation. The vegetation within and adjacent to the Proposed Action includes 77 acres (which are part of Training Area 2 on JBLE-FE) of mature hardwood forest, with developed areas slightly outside this area. Forested areas are shown on **Figure 4**. Tree species found on the project site are listed in **Table 3.9**. There was no understory in the forest, and the only common herbaceous species was Japanese honeysuckle (*Lonicera japonica*).



Table 3.9: Tree Species Found in Project Area

Common Name	Scientific Name
willow oak	Quercus phellos
sweetgum	Liquidambar styraciflua
American beech	Fagus grandifolia
loblolly pine	Pinus taeda
American holly	llex opaca
red maple	Acer rubrum
eastern redcedar	Juniperus viginianus
Other oak species	Quercus spp.

The primary objective of Fort Eustis's forest management program is to "maintain and enhance the installation's ecological integrity in support of the military mission (AFI32-7064)". USAF policy stipulates that forest resources must be managed for long-term sustainability, and that management must be compatible with protecting federally listed threatened and endangered species, maintaining biodiversity, protecting the Chesapeake Bay watershed, and providing wildlife habitat enhancement and outdoor recreational activities. The forest management program must also fully comply with all applicable federal laws, policies, and regulations pertaining to forest management.

Based on the dimensions of the road described in Section 2.1, approximately 0.32 acres would be affected on JBLE-FE property and 0.52 acres would be affected on private property. This amount of timber would not likely constitute a timber sale. Impacts on JBLE-FE land would be mitigated in accordance with the current *Timber Inventory and Forest Management Plan*. The portion of JBLE-FE that is in the limits of the Proposed Action is in a forest compartment whose management includes performing annual inspections for insect and disease control.

Wildlife Resources

Wildlife species likely to occur in the project vicinity are typical of those found in most urban-suburban areas. Mammalian species include white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*), and raccoons (*Procyon lotor*). Bird species observed or expected to inhabit the area include the Wild Turkey (*Meleagris gallopavo*), Tufted Titmouse (*Baeolophus bicolor*), Carolina Chickadee (*Poecile carolinensis*), Northern Cardinal (*Cardinalis cardinalis*), Hairy Woodpecker (*Picoides villosus*), and Downy Woodpecker (*Picoides pubescens*). Additionally, various other passerine bird species as well as some raptors such as sharp-shined and Cooper's hawks (*Accipiter striatus velox* and *Accipiter cooperii*) would be expected. Reptiles observed in the project vicinity include Eastern ratsnakes (*Pantherophis alleghaniensis*), skinks (*Pleistodon spp.*) and box turtles (*Terrapene carolina*). Amphibians observed in the area include Fowler's toad (*Anaxyrus fowleri*), marbled salamander (*Ambystoma opacum*) and Eastern red-backed salamander (*Plethodon cinereus*). In 2007, JBLE-FE natural resources staff surveyed Training Area 2 and adjacent JBLE-FE property for the state threatened Mabees salamander (*Ambystoma mabeei*) though none were found.



Completion of U.S. Fish and Wildlife Service's (USFWS) "Information, Planning, and Conservation System" (IPaC) project review process indicated that no federally threatened or endangered wildlife species or federal candidate species are known to occur within the limits of the Proposed Action. Searches of the Virginia Department of Game and Inland Fisheries database and DCR's Natural Heritage Resources database indicated that there are no rare, threatened, or endangered floral or faunal species within a two mile radius of the Proposed Action. See **Appendix F**.

Bald eagles occur on JBLE-FE. Currently seven active nest sites are documented by installation natural resources staff. However, no nest sites are known to exist in Training Area 2 nor in the immediate area of the project on JBLE-FE property.

3.8.2 Environmental Consequences

As discussed below, minor short-term and long-term effects to biological resources are anticipated from implementation of the Proposed Action.

Vegetation

Mature trees would be cleared to allow for the construction and installation of the subterranean pipe and access road. Construction would disturb the plant ecology in the immediate vicinity of the project site. After the pipe, booster station, and access road are in place, disturbed areas would be stabilized with non-invasive grass species. Temporary measures (silt fencing) would be used to ensure that no trees outside the intended area of disturbance would be removed. However, approximately 0.81 acres of forested land would be disturbed. Approximately 0.32 acres would be affected on JBLE-FE property and 0.52 acres would be affected on private property. The disturbance would be linear, approximately 1,760 feet long and 20 feet wide. All other forest would remain intact. Given the limited acreage of forest that would be disturbed, and the linear nature of the disturbance, no mitigation is planned.

USFWS IPaC review indicated that the only potential federally listed plant species that might occur at JBLE-FE is the Sensitive Joint-Vetch (*Aeschynomene virginica*). This species occurs in aquatic systems (fresh to slightly brackish tidal river systems) and normally where flooding tends to occur twice daily within the intertidal zones. The upland forested area of Training Area 2 is not appropriate habitat for this species. There are no federally listed threatened or endangered plant species known to exist on the Project Site. See **Appendix F.**

Wildlife Resources

There are no federally listed threatened or endangered wildlife species on the Project Site or on JBLE-FE property. Additionally, there are no known bald eagle nest sites in Training Area 2 nor nest sites near other areas of the project on JBLE-FE property. Consequently, no impacts to protected species are expected. Additionally, with the incorporation of proper erosion and sediment controls and BMPs to negate sediment runoff and increased storm water flow, impacts to rare, threatened and endangered species that may be located outside the project area would be avoided.

Removal of vegetative habitat may have minor adverse short-term effects on wildlife at the site due to displacement. Noise, dust, and destruction of habitat from construction would temporarily disturb



wildlife in and directly around the project area. Some animals may gradually re-enter the area once construction of the Proposed Action is complete and succession has begun. Overall, the effects on wildlife would be minor and short-term, as habitat would be only temporarily disturbed and most wildlife species would avoid the disturbance by relocating to adjacent undisturbed areas.

3.9 Cultural Resources

3.9.1 Affected Environment

Section 106 of the National Historic Preservation Act of 1966, as amended, requires federal agencies to consider the effects of their programs, projects, and actions on historic properties and to allow the Advisory Council on Historic Preservation an opportunity to comment. Qualifying properties include any prehistoric or historic district, site, building, structure, or object eligible for inclusion in the National Register of Historic Places. If adverse effects on historic, archaeological, or cultural properties are located within a project's Area of Potential Effect, then agencies must attempt to avoid, minimize, or mitigate the impacts to resources that are significant in our nation's history.

Cultural resources at JBLE-FE are managed according to the Fort Eustis *Integrated Cultural Resources Management Plan:* 2012-2016 *Draft* (ICRMP). The ICRMP provides guidelines and procedures to enable JBLE-FE to meet its legal responsibilities pertaining to cultural resources and includes the process for moving forward when these are identified within project site boundaries.

3.9.2 Environmental Consequences

In a letter to the Virginia Department of Historic Resources (VDHR), dated January 4, 2013, the USAF Civil Engineering Division reported that no historic properties are present in the project area. VDHR issued their concurrence on January 23, 2013.

3.10 Socioeconomics

3.10.1 Affected Environment

Socioeconomics examines the social and economic characteristics of a community. Demographic variables such as population size, level of employment, and incomes assist in analyzing the fiscal condition of a community and its government, school system, public services, healthcare facilities and other amenities. The socioeconomic Region of Influence (ROI) for this project consists of US Census block groups 032300-3 and 032400-2. The Proposed Action is completely within these block groups.

The regional economy is dominated by non-farming industries such as Government and Government enterprises, retail trade, professional and technical services and health care. JBLE-FE is a major employer in the area, with an annual payroll of over \$622 million in Fiscal Year 2010. The only two businesses in the study area are High Liner Foods and Newport News Industrial. Each of the block groups in the ROI contains 834 housing units; however, there are none in the study area.

3.10.2 Environmental Consequences

Implementation of the Proposed Action will result in no significant impacts to socioeconomics in either the short- or long-term. The construction phase could have a temporary positive effect on the local



economy due to the employment of local construction workers. No impacts are expected to either Fort Eustis or private sector employees with the implementation of the Proposed Action. The Proposed Action is not anticipated to affect median household incomes, and it would not impact any housing units.

3.11 Transportation

Transportation in and around the limits of the Proposed Action consists of Military training routes (those associated with Training Areas I & II Maneuver Trail), and the local road and street network. Major roads near the project area include Warwick Boulevard, Fort Eustis Boulevard, Washington Boulevard, Jefferson Avenue and Interstate 64.

3.11.1 Affected Environment

JBLE-FE is located in the northwestern part of Newport News, near the James City County line and is served by the surrounding roadway network. The public access point for JBLE-FE is on Washington Boulevard, at the northern end of the installation. Military personnel can also access JBLE-FE via secured gates on Shellabarger Drive, on the eastern boundary of the installation. On-installation routes through JBLE-FE include Washington Boulevard, Taylor Avenue, Madison Avenue, and Pershing Avenue. Newport News-Williamsburg International Airport, approximately seven miles from the main gate, is the closest commercial aviation facility.

3.11.2 Environmental Consequences

Transportation-related impacts from the Proposed Action would be negligible. Lane closures may occur intermittently along Enterprise Drive in order to move equipment to and from the project site. No full roadway closures are anticipated. Construction and worker vehicles are expected to have sufficient parking space.

3.12 Solid Waste and Utilities

This section discusses the systems and facilities that provide water, wastewater treatment, solid waste disposal, communications, natural gas and electricity.

3.12.1 Affected Environment

Potable Water Systems

According to VDH records, there is no evidence of wells in the project vicinity. ODUS owns and operates the water facilities at JBLE-FE. Water is supplied to the adjacent private land by NNWW. Water comes from the Lee Hall WTP, operated by NNWW. Water entering this treatment plant comes in the form of surface water from the Chickahominy River and brackish water from six deep wells that tap into the Potomac Aquifer. The existing water distribution system consists of approximately 50 miles of pipe, a water booster pumping station and two elevated storage tanks. JBLE-FE is currently fed through a single 14-inch water line which extends from Warwick Boulevard down Washington Boulevard to the existing water booster station in Building 6.

The surface water is pumped to the treatment plant, where it passes through screens. Chemicals are added to cause tiny particles in the water to cling together, making them easier to remove. After the water is



clarified, it is disinfected to kill microorganisms such as bacteria and viruses. The water is then sent through filters to remove any remaining particles. Lime is added to adjust the pH, fluoride is added to prevent tooth decay, and another chemical is added to control corrosion inside the pipe system. Finally, a secondary disinfectant is added to maintain disinfection in the pipe system while transporting water to homes and businesses.

Brackish well water is pumped to a desalination plant at the Lee Hall facility. Using reverse osmosis, water is forced by high pressure through membranes that remove the salt and most other contaminants to produce very high-quality water. The water is blended with treated surface water and sent to customers.

Wastewater

According to the VDH, there is no evidence of septic systems in the project vicinity. ODUS owns and operates the sanitary sewer facilities at JBLE-FE. Newport News owns and operates the sanitary sewer facilities on the private land in the project area. All wastewater generated in the project vicinity is conveyed to the Hampton Roads Sanitation District's James River Treatment Plant on Riverview Parkway in Newport News. Sewage flows to the plant via gravity sewers and force mains. The Treatment Plant has the capacity to process and treat 20 million gallons of wastewater per day. Once treatment of wastewater is complete, all treated water is discharged into the James River. The James River Treatment Plant is currently in compliance with all of the discharge standards required under its Virginia Pollutant Discharge Elimination System permit.

Stormwater Management

Stormwater from most of the study area is not treated. On the portion of the study area located on JBLE-FE, stormwater moves via natural drainages into Skiffes Creek and Bailey Creek. Stormwater on the front portion of the private parcels on Enterprise Drive flows into a roadside ditch which discharges to Skiffes Creek. Stormwater from the back portion of these parcels is treated in a small BMP near the JBLE-FE boundary. Skiffes Creek and Bailey Creek ultimately discharge into the James River, a tributary of the lower Chesapeake Bay. Virginia has stringent standards to protect the Chesapeake Bay watershed and its valuable resources and requires that all jurisdictions implement a stormwater management program to control the quantity and quality of stormwater runoff resulting from new development. JBLE-FE furthers these efforts by maintaining a Stormwater Pollution Prevention Plan that establishes BMP's for controlling and preventing contaminants associated with construction and industrial activity from reaching area surface waters.

Solid Waste

There are no active landfills on JBLE-FE; all solid waste from the base is transported to a permitted facility located off of the installation. Solid wastes in the project area are collected and disposed of in the landfill off Big Bethel Road in the City of Hampton. Recycling collection is provided both on JBLE-FE and in the City of Newport News.

Communications

Cable television, internet and telephone service in the study area is provided by Cox Communications and Verizon. Cox Communications has its headquarters in Atlanta and serves over 6 million customers



nationwide. Verizon is based in New York City and has over 98 million customers in the United States. There are fiber optic lines adjacent to the site of the proposed water booster station.

Natural Gas

Natural gas in the project area is provided by Virginia Natural Gas. Headquartered in Norfolk, Virginia Natural Gas serves over 275,000 customers in southeastern Virginia. There are natural gas lines adjacent to the land proposed for the water booster station.

Electricity

Dominion Virginia Power provides electrical service in the project area. Based in Richmond, Dominion Virginia Power serves 2.4 million customers in Virginia and northeastern North Carolina. There are electric lines running through the site of the proposed water booster station.

3.12.2 Environmental Consequences

Potable Water Systems

It is possible that short-term, localized disruptions to water service could occur at the TEMF due to construction activities. No other effects are anticipated with implementation of the Proposed Action.

Wastewater

The Proposed Action would have no impact on any existing wastewater infrastructure.

Stormwater System

Development projects typically increase stormwater runoff to surrounding ground water and surface waters during construction, when sedimentation is increased. However, because this project does not require a large increase in impervious surfaces, it is likely to have a negligible effect on stormwater quantity or quality. BMPs would be utilized to mitigate any effects.

Solid Waste

Implementation of the Proposed Action is not likely to generate a significant amount of waste during construction or operation. Any waste generated by contractor should be disposed of by the contractor at a permitted facility off installation, which would have no impact on solid waste disposal program.

Communications

Communications would not be impacted by the Proposed Action.

Electricity and Gas

The Proposed Action would require the relocation of one underground electrical line. ODUS would coordinate this work with Dominion Resources. Natural gas service would not be impacted by the Proposed Action.



3.13 Hazardous Materials

3.13.1 Affected Environment

All Hazardous Materials (HMs) must be registered with the HazMart IAW JBLE-I 32-101, Environmental Management prior to being brought onto or used on JBLE-FE.

JBLE-FE generates a variety of Hazardous Wastes (HWs) and is regulated as a Large Quantity Generator (LQG). These hazardous wastes are managed at the Installation Hazardous Waste Accumulation Facility (HWAF). All HWs generated on JBLE-FE must be managed with IAW JBLE-I 32-101 and coordination must be made with the HWAF.

The Department of Defense established the Installation Restoration Program (IRP) in 1975 to provide guidance and funding for the investigation and remediation of hazardous waste sites caused by historical activities at military installations. The fundamental goal of the JBLE-FE IRP is to protect human health, safety and the environment. The IRP is carried out in accordance with all federal, state, and local laws. The primary federal laws are Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA).

The 2008 Fort Eustis Virginia, Army Defense Environmental Restoration Program Installation Action Plan identifies the types and suspected sources of contamination on the installation and provides a clean-up strategy for each site. The only IRP site near the Proposed Action is Landfill 15. This inactive facility operated on JBLE-FE from 1972 until 1988. It is adjacent to the access road near the southeastern project terminus. During its operation, the landfill reportedly received hazardous waste consisting of domestic trash, sewage, sludge, incinerator ash and grease. The landfill was capped in 1988 and re-vegetated. DEQ considers the landfill closed and revoked its permit in 2007, yet annual maintenance of the cap (mowing, over-seeding, erosion control) will continue throughout the life of the closed landfill.

A Phase I Environmental Site Assessment was conducted on the private property that is part of the Proposed Action. As part of the assessment, a search of Federal and State hazardous materials databases was conducted for the project site and surrounding vicinity. The search indicated that Icelandic USA Inc. (High Liner Foods) is listed in the TIER 2 database for ammonia (anhydrous), CO₂ and chlorine storage onsite, and is in the Resource Conservation and Recovery Act Non-Generator (RCRA-Non-Gen) and Facility Index System (FINDS) databases. In addition to the project site, the search identified three industrial facilities along Enterprise Drive that were included in the following databases: two in RCRA-Non Gen, two in RCRA-Conditionally Exempt Small Quantity Generator, one in RCRA-LQG, and three in FINDS.

3.13.2 Environmental Consequences

Less than one acre of land would be disturbed as a result of the Proposed Action. Excavation depths would be limited to eight feet. Given the minimal anticipated ground disturbance from the Proposed Action, hazardous materials impacts are not anticipated. However, there is a potential that contaminated groundwater has migrated from Landfill 15 to the subsurface of the project site. While unlikely, ODUS would develop a plan to address groundwater contamination if it is encountered.



Construction activities would include the use of hazardous materials and could generate hazardous waste (i.e., solvents, oil). Accidents could result in leaking or spillage of hazardous materials or hazardous waste. Therefore the project has the potential to result in adverse impacts to the environment. The intensity and duration of any impacts would vary greatly depending on the substances involved and conditions of the accident. With implementation of safety measures and proper procedures for the handling, storage, and disposal of hazardous materials and wastes, the potential for adverse impacts would be minimized.

3.14 Environmental Justice

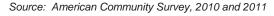
In February 1994, President Clinton signed EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This EO directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low income populations in the United States". The goal of this order is to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from Federal actions and policies on minority and low-income populations due to implementation of a Proposed Action.

As defined by *Environmental Justice Guidance Under NEPA* (CEQ, 1997), "minority populations" include persons who identify themselves as Asian or Pacific Islander, Native American or Alaskan Native, black (not of Hispanic origin), or Hispanic. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations are identified using the Census Bureau's statistical poverty threshold, which is based on income and family size.

The 2011 federal poverty guidelines (based and Health and Human Services thresholds) define the poverty level as an annual income of \$10,890 or less for an individual, and \$22,350 or less for a family of four. **Table 3.10** shows environmental justice statistics for Virginia, Newport News, and the study area. The median household income data are from 2011, while the remaining data are from 2010.

Geography Characteristic **Block Group Block Group** Newport **Virginia** 032300-3 032400-2 News Estimated 2011 Median \$46,875 \$53,621 \$50,942 \$63,302 Household Income Income Below Poverty 17.8% 10.7% 13.5% 10.3% Level in Past 12 Months Minority Population 35.0% 48.1% 51.0% 31.4% Hispanic Population 15.4% 10.9% 8.2% 8.3%

Table 3.10: 2010 Housing Units and Median Household Income





Environmental Assessment for Alternate Water Supply System, Joint Base Langley-Eustis

According to 2010 American Community Survey (ACS) data, minorities comprised 38.4 percent of the ROI's population, which is less than the Newport News minority population of 51.0 percent, but greater than Virginia's minority population (31.4 percent). Hispanics comprise 14.2 percent of the population in the ROI, compared to 8.2 percent in Newport News and 8.3 percent in Virginia. ACS data for 2011 indicate a ROI poverty level of 14.6 percent, higher than both the Newport News and Virginia rates (13.5 and 10.3 percent, respectively).

Because the Preferred Alternative is not within a residential community and it would not influence access to employment opportunities, transportation facilities, or utilities, the Proposed Action would not result in disproportionate and adverse effects to minority or low-income populations.



4.0 CONCLUSION

The Proposed Action consists of the construction of a new alternate water supply system for JBLE-FE, including a meter vault, backflow preventer, water booster station, approximately 2,450 linear feet of buried12-inch pipe, and a crush and run access road for maintenance; approximately 1700 feet long and 12 feet wide. The new alternate water supply system is needed to provide a redundant water source to be used in the case of an outage in the main system.

The No Action Alternative was used as a baseline for comparing impacts of the Build Alternatives. Because it does not meet the purpose and need for the project, however, it was not considered when selecting a Preferred Alternative. A decision matrix was created to compare the effects of two Build Alternatives (with a total of three alignments), and then select a Preferred Alternative. The matrix examined the following: impacts to the public and traffic, property impacts and easements, ease of operations and maintenance, environmental impacts, constructability, utility conflicts, and costs. Based on results of the decision matrix, and due to its shorter length and lack of a river crossing, Alternative 2 in the Oakland Industrial Park was selected as the Preferred Alternative. It yielded the highest score in the decision matrix and would create the fewest adverse effects to natural resources, including wetland ecosystems, mature forests, and a variety of plant and animal species.

The Preferred Alternative meets the project's purpose and need by providing the alternate water supply system needed for redundancy in the case of an outage in the main system.

The Proposed Action would not displace any residences or businesses, and would not impact any historic resources. There would be no Environmental Justice concerns. Impacts from generation of hazardous waste or solid waste, and utilities in the project area are expected to be minimal. **Table 4.1** quantifies the impacts that would result from implementation of the Proposed Action. A total of 1.18 acres of land would be disturbed; 0.81 acres of this is forested land that would be eliminated. The Proposed Action would require 0.50 acres of permanent easements. There would be no floodplain impacts, but 0.003 acres of PEM wetlands would be permanently impacted. A permit will be secured from USACE and DEQ for all wetland impacts.

Table 4.1: JBLE-FE Alternate Water Supply System Impact Summary

Impact Category	Impact (Acres)		
	Total	Private Property	JBLE-FE Property
Land Disturbance	1.18	0.50	0.68
Forested Land	0.81	0.50	0.31
Permanent Easements	0.50	0.50	0
Impervious Surface	0.52	0.30	0.22
Wetlands	0.003	0.003	0



Minor short-term impacts, primarily from construction activities, are anticipated to occur to air quality, noise levels, aesthetics and visual quality, geology and soils, biological resources, and traffic. Short-term beneficial effects on socioeconomics are likely, due to the potential employment of local workers during construction.

No significant adverse effects resulting from implementation of the Proposed Action have been identified. All agency coordination and permitting requirements would be completed prior to construction of the project. Mitigation measures associated with the Proposed Action include a variety of BMPs to be implemented both during and after construction to avoid and minimize adverse environmental effects. These include:

- Compliance with a DCR-approved stormwater management plan and erosion and sediment control plan, using stormwater management and erosion control BMPs required by DCR.
- Use of tree preservation measures. Fencing would be incorporated into construction plans in order to protect all trees outside the intended area of disturbance.
- Securing a Clean Water Act Section 404 permit from the USACE and a permit from DEQ, pursuant to Virginia's State Water Control Law and its Nontidal Wetlands Act. Any required mitigation measures in the permit would be implemented.
- Treating all construction equipment in a manner that would minimize the spread of invasive species.
- Compliance with all applicable federal, state, and local air regulations.
- Compliance with Virginia's Coastal Zone Management Program and EO 13508.
- Conducting construction activities during normal weekday work hours (generally 7 a.m. to 5 p.m.) and avoiding conducting construction activities on evenings and weekends to the extent practical.
- Preserving natural areas where possible and using non-invasive vegetation to stabilize soil.

Based on the evaluation of environmental consequences of the proposed action discussed in this EA, an Environmental Impact Statement (EIS) is not necessary and a FNSI would be prepared.



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Ms. Ellie Irons Virginia Department of Environmental Quality 629 East Main Street, 8th Floor Richmond, VA 23219

7.2 Libraries

Groninger Library BLDG 1313 Fort Eustis, VA 23604

Grissom Public Library 366 DeShazor Drive Newport News, VA 23606

Christopher Newport University Library 1 University Place Newport News, VA 23606

7.3 Newspapers

Daily Press 7505 Warwick Blvd., Newport News, VA 23607



Appendix A - Agency Correspondence





WHITMAN, REQUARDT & ASSOCIATES, LLP ENGINEERS · ARCHITECTS · PLANNERS EST. 1915

June 6, 2013

Ms. Barbara Rudnick NEPA Team Lead US Environmental Protection Agency, Region III, Environmental Programs Branch Mail Code 3EA30 1650 Arch Street Philadelphia, PA 19103

Re: Alternative Water Source, Joint Base Langley-Eustis Alternative

Dear Ms. Rudnick,

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates (WR&A) would like to thank you for porviding input on the above referenced project's Environmental Assessment (EA). WR&A is providing the following responses to address your comments/questions (EPA memo attached).

- A scoping letter was sent to your office in January, 2013. However we have no record of receipt of a response.
- High Liner Foods Inc. is the owner of the private property on which a portion of the alternate water supply system would be located. A sentence referencing coordination with the private owner has been added (pages 6, and 13).
- Exhibit 3 (page 12) has been updated to include the identification of the newly constructed TEMF (referenced on page 18).
- Removed "protective" from vegetation discussion and added the following footnote on depth of soil disturbance (page 19): "Typical depth of installation is 3 ft. of cover with a 1 ft. pipe and 6 inches of stone bedding (about 5 ft). Pipeline and booster station installation does not exceed 8 ft."
- Added the following footnote on the definition of "Impact Area" (page 20): "The Munitions and Explosives of Concern Hazard Assessment (MEC HA) defines a target area as "Areas at which munitions fire was directed." Those areas within the designated range boundaries which could be used as a target area or which could reasonably be used as a munitions fire area. With the exception of the range safety fans all areas within the designated range limit would be considered impact areas."
- Size of wetlands are stated in Table 3.8 (page 23).
 - o no indirect impacts are anticipated
 - o an alignment shift is not possible due to future expansion plans of the property owner, the current alignment will utilize a 20 foot easement strip that is the only amenable option
- Specific aquatic life associated with the perennial stream noted on page 22 is not known. However, the stream will be avoided and therefore no direct impacts are anticipated. Indirect impacts are also not anticipated due to the nature of the project.
- The EA has been updated to include EO 13508 discussion (page 22, 24, 35)
- Regarding the possibility of testing groundwater near the Landfill 15 site, a review of the sites history found no seepage issues or leachate leaking out and borings completed in January 2012

801 South Caroline Street, Baltimore, Maryland 21231 www.wrallp.com Phone: 410.235.3450 Fax: 410.243.5716

indicated static water at 7 feet (after 24 hours) for the one closest to the landfill. Therefore, no ground water testing is planned.

Very truly yours,

Whitman, Requardt & Associates, LLP

Nicholas Nies

Senior Environmental Planner

Enclosures

cc: Timothy P. Christensen, Chief, Conservation Branch-Environmental Element

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III

1650 Arch Street Philadelphia, Pennsylvania 19103-2029

SUBJECT: Joint Base Langley-Eustis Alternative Water Supply System EA

FROM: Karen DelGrosso, NEPA Reviewer for Federal Facilities

TO: Barbara Rudnick, NEPA Team Leader

As requested, I gave a quick review to the subject EA and have the following comments/questions as highlighted in bold.

Page 6, "Coordination with Federal and State agencies to solicit comments related to their corresponding areas of jurisdiction, and to obtain concurrence with the initial findings for the Proposed Action, was initiated in January 2013. Agencies contacted include the US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE), US Environmental Protection Agency (EPA),...." It is important to note that there was no interaction with the EPA other than a phone call made on or near 5/1/13 asking for a quick review of the existing EA.

Page 13, "The Preferred Alternative would span approximately 2,450 feet, with approximately 1,350 feet on JBLE-FE, and the remaining 1,100 feet on adjacent private property." Who owns the private property? Has there been involvement with and approval of private property owners?

Page 18, "The access road would be 12 feet wide, spanning the length of the project. While the road itself would be a new visual element, the surrounding forest would be left intact, largely hiding the road from view. The proposed water booster station would be adjacent to the newly-constructed Tactical Equipment Maintenance Facility (TEMP), and would not change the visual character of the area." Indicate on map the proposed water booster station near the newly-constructed TEMF.

Page 19, "Installation of the pipe and construction of the maintenance access road and water booster station would involve the removal of protective vegetation and disturbance of soils to the depth required for installation or construction." Explain, describe and quantify protective vegetation impacted. The approximate depth of soil disturbance should be stated in the EA. Page 31 states, "Excavation depths would be limited to eight feet." Is this the maximum depth of disturbance?

Page 20, "Nearly 100% of the Installation has been delineated by the US Army Corps of Engineers Norfolk District excluding most of the impact area which is not associated with the Proposed Action." Please explain "impact area" referenced in relation to the Proposed Action and include map of area.

Page 20 states, "Two wetlands were identified on the private land within the limits of the Proposed Action. Both were Palustrine Emergent (PEM), with the vegetation dominated by cattails (Typha latifolia), soft rush (Juncus effuses), and woolgrass (Scirpus cyperinus). Four Palustrine Forested (PFO) wetlands were found on the JBLE-FE land within or near the limits of the Proposed Action. The dominant wetland vegetation on this part of the base includes cherrybark oak (Quercus pagoda), green ash (Fraxinus Pennsylvania), chain fern (Woodwardia spp.), and soft rush. No impacts to wetlands on the installation are expected based on avoidance. Wetlands located within or near the limits of the Proposed Action are shown on Figure 4." What is the size of the wetlands? Describe indirect impacts to wetlands. Figure 4 indicates a direct impact to Wetland 2 and possibly Wetland 1 (on private land). It appears from the map that forested land is to the left of Wetlands 1 and Can the alignment be moved to the left to avoid impact to wetlands?

Page 22, "However, a perennial stream is located immediately adjacent to the study area within Training Area 2. The perennial stream runs beside and under (through a culvert system) the Proposed Action's route along the main Training Area 2 Maneuver Trail. There will be no direct impact to the perennial stream in terms of mechanical alteration however; proper erosion and sediment control and spill prevention measures will be part of any permit from DCR." Please provide information on the condition of the perennial stream, aquatic life in the stream and potential indirect impacts to the stream as a result of the Proposed Action.

Page 22, "The study area is entirely within Virginia's Coastal Zone Management (CZM) Program area, which includes the Chesapeake Bay." The EA did not address EO 13508 Chesapeake Bay Watershed.

Page 30, "The only IRP site near the Proposed Action is Landfill 15." This inactive facility is adjacent to the access road. The landfill was capped in 1988 and re-vegetated; DEQ considers the landfill closed and revoked its permit in 2007. Page 31

states, "... there is a potential that contaminated groundwater has migrated from Landfill 15 to the subsurface of the project site. While unlikely, ODUS would develop a plan to address groundwater contamination if it is encountered." Can groundwater be tested prior to excavation to determine the condition of the site?



DEPARTMENT OF THE ARMY

NORFOLK DISTRICT, CORPS OF ENGINEERS FORT NORFOLK, 803 FRONT STREET NORFOLK, VIRGINIA 23510-1096

May 8, 2013

PRELIMINARY JURISDICTIONAL DETERMINATION

Southern Virginia Regulatory Section (NAO-2013-00463, Skiffs Creek)

Whitman, Requardt & Associates, LLP Mr. David Kwasniewski 9030 Stony Point Parkway, Suite 220 Richmond, Virginia 23235

Dear Mr. Kwasniewski:

This letter is in regard to your request for a preliminary jurisdictional determination for waters of the U.S. (including wetlands) within the project study area for the proposed Joint Base Langley-Eustis alternate water source off Enterprise Drive in Newport News, Virginia.

The drawing entitled "Fort Eustis Alternate Water Source" dated January 10, 2013 and submitted on March 6, 2013 by WR&A provides the locations of waters and/or wetlands on the property listed above. The basis for this delineation includes application of the Corps' 1987 Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region and the positive indicators of wetland hydrology, hydric soils, and hydrophytic vegetation and the presence of an ordinary high water mark.

No permit will be required from the Corps of Engineers for the proposed work shown on sheets 1 through 40 of the drawings entitled "Old Dominion Utility Services Alternate Water Supply Line and Booster Station, Fort Eustis" dated February 2013 by WR&A. Please coordinate the proposed work with the Department of Environmental Quality.

The Norfolk District has relied on the information and data provided by the applicant or agent. If such information and data subsequently prove to be materially false or materially incomplete, this verification may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or

wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination. This preliminary jurisdictional determination and associated wetland delineation map may be submitted with a permit application.

The "Preliminary Jurisdictional Determination Form" is enclosed. Please review the document, sign, and return a copy to the Corps Regulatory Office (Melissa Nash, 803 Front St. Norfolk, VA 23510) within 30 days of receipt and keep a copy for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

If you have any questions, please contact Melissa Nash at 757-201-7489 or melissa.a.nash@usace.army.mil.

Sincerely,

Lynette R. Rhodes Chief, Southern Virginia

Regulatory Section

Melisso a Nach

Enclosure:

Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION:

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): March 4, 2013

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Joint Base Langley-Eustis c/o Whitman, Requardt & Associates, LLP Mr. David Kwasniewski 9030 Stony Point Parkway, Suite 220

C. DISTRICT OFFICE: Norfolk District (CENAO-REG)

FILE NAME: Joint Base Langley - Eustis Alternate Water Supply

FILE NUMBER: NAO-2013-00463

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: VIRGINIA County/parish/borough: City: Newport News

Center coordinates of site (lat/long in degree decimal format):

Latitude: 37.10471 ° N Longitude: -76.51973 ° W

Universal Transverse Mercator:

Name of nearest waterbody: Skiffs Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet; width (ft); and/or acres.

Cowardin Class:

Stream Flow:

Wetlands: 0.005 acres
Cowardin Class: PEM

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: Skiffs Creek

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s): May 1, 2013

- 1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
- 2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.
- 3. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA:

Data reviewed for preliminary JD (check all that apply) - checked items should be included in case file and, where checked and requested, appropriately reference sources below.

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Exhibit entitled "Fort Eustis Alternate Water Source" dated January 10, 2013 and submitted on March 6, 2013 by WR&A

□ Data sheets prepared/submitted by or or	n behalf of the applicant/consultant.
○ Office concurs with data sheets/deline	eation report. March 4, 2013 report
Office does not concur with data sheet	ets/delineation report.
Data sheets prepared by the Corps:	
Corps navigable waters' study:	
U.S. Geological Survey Hydrologic Atlas	:
USGS NHD data.	
USGS 8 and 12 digit HUC maps.	
⊠ U.S. Geological Survey map(s). Cite sca	le & quad name: Yorktown Quad
	Service Soil Survey.
Citation: SSURGO Soils Newport News	
── National wetlands inventory map(s). Cite	e name: Yorktown Quad
State/Local wetland inventory map(s):	
FEMA/FIRM maps: Chuckatuck Quad	
☐ 100-year Floodplain Elevation:	(National Geodetic Vertical Datum of 1929)
	: 1990 Color IR; Kucera photo
or Other (Name & Date):	
Previous determination(s):	
File no. and date of respo	onse letter:
Other information (please specify):	
IMPORTANT NOTE: The information recorded verified by the Corps and should not be relied determinations.	
Molon- a Nach Signature Regulatory Project Manager (REQUIRED)	Signature of person requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
May 8, 2013	
Date	Date

SAMPLE

Latitude	atitude Longitude		Estimated amount of aquatic resource in review area	Class of aquatic resource
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				*
				and the state of t
	Latitude	Latitude Longitude	Latitude Longitude Cowardin Class	Class aquatic resource in review area

Smith, Susan

From: Baxter, Amanda

Sent: Monday, February 25, 2013 11:16 AM

To: Smith, Susan Cc: Nies, Nicholas

Subject: FW: Alternative Water Source, JBLE

From: Albrecht, Edward (VDH) [mailto:Edward.Albrecht@vdh.virginia.gov]

Sent: Monday, February 25, 2013 10:15 AM

To: Baxter, Amanda

Cc: Ellis, Charles (DEQ); Matthews, Barry (VDH) Subject: Alternative Water Source, JBLE

•

Location: Joint Base Langley-Eustis

Newport News

VDH – Office of Drinking Water has reviewed the above project. ODW comments on the proximity of public drinking sources and potential impacts to those sources considering the scope of the project.

There are 2 groundwater wells within a 1 mile radius: the City of Newport News has two groundwater wells located 2,653 ft away north of the project site.

There is 1 surface water intake in Zone 1 (within a 5 mile radius), the City of Newport News, which is 1.5 miles upgradient of the project site.

There are no apparent impacts and ODW has no additional scoping comments.

Edward Albrecht

Virginia Department of Health, Office of Drinking Water 109 Governor Street, Sixth Floor Richmond, VA 23219 (P) 804-864-7495

Edward.Albrecht@vdh.virginia.gov

Smith, Susan

From: Nash, Melissa A NAO <Melissa.A.Nash@usace.army.mil>

Sent: Monday, February 11, 2013 11:12 AM

To: Smith, Susan Cc: Baxter, Amanda

Subject: RE: Fort Eustis waterline project scoping (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Susan,

The proposed project appears to avoid the wetland impacts on the property. I would just recommend strict erosion and sediment control when the work is occurring close to the wetland areas.

Thanks, Melissa

Melissa Nash Norfolk District, Regulatory Branch 803 Front Street Norfolk, VA 23510

----Original Message----

From: Smith, Susan [mailto:ssmith@wrallp.com] Sent: Wednesday, January 23, 2013 1:04 PM

To: Nash, Melissa A NAO Cc: Baxter, Amanda

Subject: RE: Fort Eustis waterline project scoping (UNCLASSIFIED)

Hi Melissa,

The standard window for comments is within 30 days of receipt of the request. However, we have a tight deadline on this project, so if you could comment sooner than that I would appreciate it.

Thanks, Susan

----Original Message----

From: Nash, Melissa A NAO [mailto:Melissa.A.Nash@usace.army.mil]

Sent: Tuesday, January 22, 2013 10:33 AM

To: Smith, Susan

Subject: Fort Eustis waterline project scoping (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Susan,

The project has been assigned to me. I am the point of contact for Fort Eustis. John Evans actually handles Langley. Tim Christensen mentioned this project to me recently. Do you have a deadline for comments?

Melissa (757) 201-7489

---Original Message----From: Kube, Peter R NAO

Sent: Thursday, January 17, 2013 2:44 PM

To: Evans, John D NAO; Smith, Susan

Subject: FW: Project Scoping, JBLE (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Hi Susan,

John Evans handles project reviews at Joint Base Langley Eustis. He has been assigned the review of your request.

Thanks.

Peter Kube, Chief Western Virginia Regulatory Section US Army Corps of Engineers 803 Front Street Norfolk, VA 23510

Phone (757) 201-7504

The Norfolk District is committed to providing the highest level of support to the public. In order for us to better serve you, we would appreciate you completing our Customer Satisfaction Survey located at http://per2.nwp.usace.army.mil/survey.html. We value your comments and appreciate your taking the time to complete the survey.

----Original Message----

From: Smith, Susan [mailto:ssmith@wrallp.com]

Sent: Thursday, January 17, 2013 2:29 PM

To: Kube, Peter R NAO

Subject: Project Scoping, JBLE

Mr. Kube,

Attached please find a scoping letter and map for an alternate water source project on Joint Base Langley Eustis, in Tidewater Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. We would appreciate your comments.

Thank you,

Susan L. Smith, WPIT | Senior Environmental Scientist

Whitman, Requardt & Associates, LLP

9030 Stony Point Parkway, Suite 220

Richmond, VA 23235

(Phone) 804.272.8700

(Main Fax) 804.272.8897

ssmith@wrallp.com

www.wrallp.com

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WRA_Disclaimer_v20070222a

Classification: UNCLASSIFIED

Caveats: NONE

Smith, Susan

From: Baxter, Amanda

Sent: Monday, January 28, 2013 11:48 AM

To: Smith, Susan

Cc: Nies, Nicholas; Kwasniewski, David

Subject: FW: Joint Base Langley Eustis Alternate Water Source Scoping

See below...

From: Johnson, Mike (MRC) [mailto:Mike.Johnson@mrc.virginia.gov]

Sent: Monday, January 28, 2013 10:04 AM

To: Baxter, Amanda Cc: Ellis, Charles (DEQ)

Subject: Joint Base Langley Eustis Alternate Water Source Scoping

Ms. Baxter,

Please be advised that the Commission, pursuant to Section 28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along natural rivers and streams above the fall line or mean low water below the fall line, a permit may be required from our agency. Any jurisdictional impacts will be reviewed by VMRC during the Joint Permit Application process. Thank you for the opportunity to comment.

Mike Johnson Habitat Management Division VMRC 2600 Washington Ave. Newport News, Va 23607 757-247-2255



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

January 23, 2013

David K. Paylor Director

(804) 698-4000 1-800-592-5482

Ms. Amanda J. Baxter Vice-President, Environmental Whitman, Requardt & Associates, LLP 3701 Pender Drive, Suite 450 Fairfax, Virginia 22030

RE: Alternative Water Source, Joint Base Langley-Eustis

Dear Ms. Baxter:

Douglas W. Domenech

Secretary of Natural Resources

Thank you for your January 17, 2013 letter (received via e-mail) regarding the preparation of an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) covering a proposed alternative water source for Joint Base Langley-Eustis (JBLE) in Newport News.

PROJECT DESCRIPTION

As described in your letter, JBLE would construct a 12-inch water main that will connect with an existing 16-inch water main located in the Oakland Industrial Park. In addition, a short gravel access road would be bullt to allow for maintenance of the water mains. This project would provide a redundant water supply point, improving system reliability in the case of an outage in the existing system.

ENVIRONMENTAL REVIEW UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

The roles of the Virginia Department of Environmental Quality (DEQ) in relation to the project are as follows. First, DEQ's Office of Environmental Impact Review (OEIR) will coordinate Virginia's review of the NEPA document and comment to JBLE on behalf of the Commonwealth. A similar review process will pertain to the Federal Consistency Determination (FCD) (see "Federal Consistency..." heading, below). If the FCD is provided as part of the environmental document, there can be a single review.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Zone Management Program (VCP) (see section 307(c)(1) of the Act and the Federal Consistency Regulations, 15 CFR Part 930, subpart C, sections 930.30 et seq.). JBLE must provide a consistency determination which includes an analysis of the proposed activities in light of the enforceable policies of the VCP (first enclosure) and a commitment to comply with the enforceable policies. In addition, we invite your attention to the advisory policies of the VCP (second enclosure). As indicated, the FCD may be provided as part of the NEPA document or independently, depending on the JBLE's preference. We recommend, in the interests of an effective review, that the FCD be provided with the NEPA document and that at least 60 days be allowed for review, in keeping with the Federal Consistency Regulations (see section 930.41(a)). Section 930.39 of these Regulations, and Virginia's Federal Consistency Information Package (available at

http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview/FederalConsistencyReviews.aspx) give content requirements for the FCD.

PROJECT SCOPING AND AGENCY INVOLVEMENT

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the NEPA document. Accordingly, we are sharing our response to the letter with selected state and local Virginia agencies which have responsibilities bearing on the subject of the NEPA document. These are likely to include the following (note: starred (*) agencies administer one or more of the enforceable policies of the VCP):

Department of Environmental Quality:

- Office of Environmental Impact Review
- Tidewater Regional Office*
- Division of Air Program Coordination*
- o Division of Land Protection and Revitalization (formerly Waste Division)

Department of Conservation and Recreation:

- Division of Stormwater Management*
- Division of Planning and Recreation Resources

Department of Health (Division of Water Programs)*

Department of Game and Inland Fisheries*

Virginia Marine Resources Commission*

Department of Historic Resources

Hampton Roads Planning District Commission

City of Newport News.

INFORMATION ON WASTE MATERIALS and OTHER ISSUES

DEQ and other agencies maintain databases on hazardous materials. We are enclosing a copy of Appendix 10 (see below) of DEQ's most recent Environmental Impact Report Procedure Manual (dated July 2012) that lists databases and indicates their uses and contents. Questions on waste management may be directed to DEQ's Division of Land Protection and Revitalization (Steve Coe at 804-698-4029 or Stephen.Coe@deq.virginia.gov).

DEQ Online Database: Virginia Environmental Geographic Information Systems

Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory

- www.deg.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- DEQ Permit Expert

Helps determine if a DEQ permit is necessary

- www.deg.virginia.gov/permitexpert/
- DHR Data Sharing System

Survey records in the DHR inventory

- o www.dhr.virginia.gov/archives/data sharing sys.htm
- DCR Natural Heritage Search

Produces lists of resources that occur in specific counties, watersheds or physiographic regions

- www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml
- DGIF Fish and Wildlife Information Service

Information about Virginia's Wildlife resources

- o http://vafwis.org/fwis/
- Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
 Database: Superfund Information Systems

Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL

- o www.epa.gov/superfund/sites/cursites/index.htm
- EPA RCRAInfo Search

Information on hazardous waste facilities

www.epa.gov/enviro/facts/rcrainfo/search.html
 EPA Envirofacts Database

EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports

- o www.epa,gov/enviro/index.html
- EPA NEPAssist Database

Facilitates the environmental review process and project planning

http://nepassisttool.epa.gov/nepassist/entry.aspx

In order to ensure an effective coordinated review of environmental documents, OEIR typically require 18 copies. The submission may include 3 hard copies and 15 CDs or 3 hard copies and an electronic copy available for download at a website, file transfer protocol site or the VITAShare file transfer system (https://vitashare.vita.virginia.gov). The document should include a U.S. Geological Survey topographic map as part of its information. We recommend, as well, that project details unfamiliar to people outside the Army and Air Force be adequately described.

If you have questions about the environmental review process or the federal consistency review process, please feel free to call me at (804) 698-4325 or Charlie Ellis at (804) 698-4195.

I hope this information is helpful to you.

Sincerely,

Ellie JS

Ellie L. Irons, Program Manager Environmental Impact Review

Attachments

ec: Cindy Keltner, DEQ-TRO
Kotur S. Narasimhan, DEQ-DAPC
G. Stephen Coe, DEQ-DLPR
Roberta Rhur, DCR
Amy M. Ewing, DGIF
Barry Mathews, VDH
Roger W. Kirchen, DHR
Tony Watkinson, VMRC
John Carlock, Hampton Roads PDC

cc. Shella McAllister, City of Newport News

Smith, Susan

From:

Smith, Susan

Sent:

Friday, January 18, 2013 2:40 PM

To:

Baxter, Amanda

Subject:

FW: Project Scoping, JBLE

Attachments:

20120413 letter directing to website.pdf

Amanda,

I'm taking care of this.

From: Troy Andersen [mailto:troy andersen@fws.gov]

Sent: Thursday, January 17, 2013 3:58 PM

To: Baxter, Amanda

Cc: Smith, Susan; Christensen, Timothy P CIV (US)

Subject: RE: Project Scoping, JBLE

Ms. Baxter:

To provide you with more timely information, we have developed an online project review process for Service Trust Resources (See attached letter). The process is accessible

at: http://www.fws.gov/northeast/virginiafield/endspecies/Project Reviews Introduction.html. It will allow you to evaluate your project for potential Trust Resource habitat, and if the project will have no effect on Trust Resources, you will be able to self-certify and receive a letter from the Service to this effect. If your project may affect listed species, going through the process will help you develop a project review package that will allow us to expedite our review of the project. Please use this process for this and all future project reviews.

The attached letter is currently being updated and I serve as the primary point of contact vice Kim Smith listed in the letter.

V/R Troy

Troy M. Andersen

Endangered Species/Conservation Planning Assistance Supervisor

USFWS – Virginia Field Office Phone: 804-693-6694 Ext. 166

Mobile: 804-654-9235

Visit us at: http://www.fws.gov/northeast/virginiafield/

From: Smith, Susan [mailto:<u>ssmith@wrallp.com</u>]
Sent: Thursday, January 17, 2013 3:08 PM

To: cindy schulz@fws.gov
Subject: Project Scoping, JBLE

Ms. Schulz,

Attached please find a scoping letter and map for an alternate water source project on Joint Base Langley Eustis, in Tidewater Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. We would appreciate your comments.

Thank you,

Susan L. Smith, WPIT | Senior Environmental Scientist

Whitman, Requardt & Associates, LLP

9030 Stony Point Parkway, Suite 220 Richmond, VA 23235 (Phone) 804.272.8700 (Main Fax) 804.272.8897 ssmith@wrallp.com www.wrallp.com

The information supplied in this message may be privileged, confidential and/or exempt from disclosure under applicable law. If you are not the intended recipient of this message, the sender does not intend delivery to you to waive any privilege or right pertaining to this message. You have no right to retain, disseminate, copy or disclose the material contained herein. If you have received this message in error, please immediately notify the sender by return e-mail, and delete the errant message. Thank you.

WRA Disclaimer v20070222a



United States Department of the Interior



FISH AND WILDLIFE SERVICE Ecological Services 6669 Short Lane Gloucester, Virginia 23061

APR 1 3 2012

Greetings:

Due to increases in workload and refinement of our priorities in Virginia, this office will no longer provide individual responses to requests for environmental reviews. However, we want to ensure that U.S. Fish and Wildlife Service trust resources continue to be conserved. When that is not possible, we want to ensure that impacts to these important natural resources are minimized and appropriate permits are applied for and received. We have developed a website, http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews_Introduction.html, that provides the steps and information necessary to allow landowners, applicants, consultants, agency personnel, and any other individual or entity requiring review/approval of their project to complete a review and come to the appropriate conclusion.

The website will be frequently updated to provide new species/trust resource information and methods to review projects, so refer to the website for each project review to ensure that current information is utilized.

If you have any questions about project reviews or need assistance, please contact Kimberly Smith of this office at (804) 693-6694, extension 124, or kimberly_smith @fws.gov. For problems with the website, please contact Mike Drummond of this office at mike_drummond@fws.gov.

Sincerely,

Cindy Schulz

Supervisor

Virginia Field Office



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS, 733D MISSION SUPPORT GROUP JOINT BASE LANGLEY-EUSTIS FORT EUSTIS, VIRGINIA

JAN 04 2013

Civil Engineering Division

Mr. Marc Holma Review and Compliance Virginia Department of Historic Resources 2801 Kensington Avenue Richmond, Virginia 23221

Dear Mr. Holma,

The US Air Force proposes to construct an alternate water source pipeline for Joint Base Langley-Eustis (JBLE). The project area for the pipeline is located in Training Area 2 of Fort Eustis and also on the privately owned Oakland Industrial Park. The portion of the project area within the boundary of JBLE is located in forested uplands in Training Area 2 bordered to the south by a gravel road and to the north by the installation boundary. The project area corresponds to the immediate vicinity of the proposed water line alignment and covers approximately 2.45 acres (0.99 ha). The portion of the project area on the Oakland Industrial Park was subject to archaeological survey prior to the development of the property. No archaeological sites were identified within the current project area.

The cultural resources staff at Joint Base Langley-Eustis-Eustis conducted a Phase I archaeological survey of the portion of the proposed Alternate Water Source project area which fell within installation boundaries on October 23-25 and November 29, 2012 (see report). The results of the archaeological survey of the Alternate Water Source project area indicate that no archaeological sites and four locations are located within the project area. By definition, Locations 1-4 are not eligible for the National Register of Historic Places. In addition, no historic buildings are present in the project area. Therefore, the Air Force has determined that no historic properties are present in the project area. The portion of the project area on the Oakland Industrial Park was subject to archaeological survey prior to the development of the property. No archaeological sites were identified within the current project area prior to the construction of the Industrial Park.

Therefore, the Air Force has determined that there are no historic properties in the area of potential effects for this undertaking. We request that you review this determination and forward your comments within 30 days. If you do not comment within 30 days, we will assume you agree with the Air Force's determination of no historic properties adversely affected by this undertaking and will proceed without taking further steps in the Section 106 process.

If you have any questions, please contact Christopher L. McDaid at (757) 878-4123 ext 295 or email christopher.l.mcdaid.civ@mail.mil.

Sincerely,

Susan P. Miller

Chief, Environmental Element

moran P. Mule,

Enclosures

01/29/2013 21:11

The VDHR concurs with the Air Porce's determination of no historic properties in the APB of the Alternate Water Source Pipeline project

Project Reference: FE 2012.023: Alternate Water Source Pipeline project



January 17, 2013

Ms. Ellie Irons Virginia Department of Environmental Quality 629 East Main Street, 8th Floor Richmond, VA 23219

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Ms. Irons:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

The current system is expected to remain operational for only 22 hours if there is a water main break or if maintenance is required. The proposed project would provide a redundant water supply point, improving system reliability in the case of an outage in the existing system. The study will evaluate the potential effects of the proposed project on natural, cultural, and human resources.

The purpose of this letter is to request your input in the identification of environmental resources and/or potential environmental constraints and other relevant factors associated with the Preferred Alternative. Specifically we are requesting any information or records regarding environmental issues within the project area. In addition, any comments or concerns you have regarding the proposed project would be greatly appreciated. Additionally, per the Department of Environmental Quality Environmental Impact Review process for federal projects, please distribute this scoping letter to the appropriate state agencies.

Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Ms. Barbara Rudnick US Environmental Protection Agency, Region III, Environmental Programs Branch Mail Code 3EA30 1650 Arch Street Philadelphia, PA 19103

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Ms. Rudnick:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Steve Bloodgood High Liner Foods 190 Enterprise Drive Newport News, VA 23603

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Bloodgood:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Neil A. Morgan City of Newport News City Manager 2400 Washington Avenue Newport News, VA 23607

Re:

Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Morgan:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Ms. Sheila W. McAllister City of Newport News Planning Director 2400 Washington Avenue Newport News, VA 23607

Re:

Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Ms. McAllister:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Jim Kelly NNS&DDCo 182 Enterprise Drive Newport News, VA 23603

Re:

Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Kelly:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Brian L. Ramaley City of Newport News Waterworks Director 700 Town Center Drive Newport News, VA 23606

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Ramaley:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Kilby Majette Natural Resources Conservation Service, Quinton Service Center 2502 New Kent Highway Quinton, VA 23141-1735

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Majette:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Mr. Peter Kube US Army Corps of Engineers, Norfolk District 803 Front Street Norfolk, VA 23510

Re: Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Mr. Kube:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures



January 17, 2013

Ms. Cindy Shultz US Department of the Interior, Fish and Wildlife Service 6669 Short Lane Gloucester, VA 23061

Re:

Alternative Water Source, Joint Base Langley-Eustis

City of Newport News

Dear Ms. Shultz:

On behalf of Joint Base Langley-Eustis (JBLE) (point of contact: Mr. Timothy Christensien, Chief, Conservation Branch Environmental Element [Timothy.P.Christensen.civ@mail.mil, 757-878-4231]), Whitman, Requardt and Associates is preparing an Environmental Assessment (EA) in accordance with Air Force policies implementing the National Environmental Policy Act (NEPA) 32 CFR Part 989 for a proposed alternate water source for JBLE in the Tidewater area of Newport News, Virginia. The Preferred Alternative includes construction of a 12-inch water main that will connect to an existing 16 inch water main located in the Oakland Industrial Park. Additionally, the Preferred Alternative includes a short, gravel, access road to allow for maintenance of the water mains. The attached map depicts the location of the Preferred Alternative.

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Very truly yours,

Whitman, Requardt & Associates, LLP

Amanda J. Baxter

Vice President - Environmental

Enclosures

Appendix B - Conceptual Plan Set



UD DOMINION U LTERNATE

FORT EUSTIS, VIRGINIA 23604 FORT EUSTIS

REZONING CASE #CZ-79-10 APPROVED 1979

FEBRUARY 2013

THE LOCATION AND SHEET INDEX

THE LOCATION AND SHEET INDEX

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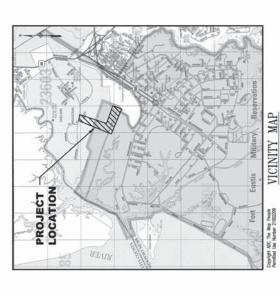
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SHEET INDEX



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(SEE SHEET G1.01 FOR SITE AND BUILDING DATA.)

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WHITMAN, REQUARDT & ASSOCIATES, LLP 1359 Mercharts Wall, Solar 200, Newport News, VA. 31606

90% SUBMITTAL NOT TO BE USED FOR CONSTRUCTION

OLD DOMINION UTILITY SERVICES 2023 HARRISON BOAD PORT EUSTIS, VIRGINIA, 23604

1" = 1000" SCALE

PERRUARY 2013

OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

TITLE, LOCATION, AND SHEET INDEX

G0.01 DRAWING

DATE

CITY OF NEWPORT NEWS GENERAL NOTES

- 1. EXTERIOR CONCRETE SHALL BE VIRGINIA DEPARTAENT OF TRANSPORTATION (VIDGT) CLASS A3.
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- 13. ALL PROPOSED DUCTALE IRON SANITARY SENER PIPE SHALL BE MINIMUM THICKNESS CUASS 52.
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- THERE SHALL BE NO STORM WATER LINE CONNECTIONS TO THE SANITARY SEWER SYSTEM.

CITY OF NEWPORT NEWS GENERAL NOTES (CONTINUED);

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 - 23. DENTRY THE LUCATION OF ANY FENCING, TEMPORARY OR PERMANENT, OR ANY OTHER POTENTIAL DISSTRUCTIONS OR FIRE. LAWS: 24. AMY BUSHES, TREES, FENCING, ETC. SHALL BE A MINAMUM OF 3 FEET FROM FIRE HYDRARIS AND OTHER FIRE SUPPRESSION EQUIPMENT.
- 25. CANDPES MUST BE A MINIMAL VERTICAL CLEARANCE OF 13 FEET 6 INCHES IF THEY PENETRAITE INTO A FIRE LANE/FIRE ACCESS ROAD.

 - 26, FDCS SHALL BE LOCATED ON A STREET FRONT, A MINIMUM OF 40 FEET FROM THE BUILDING, AND NO MORE THAN 100 FEET FROM A FIRE HYDRANT.
- 27, PLANS FOR AUTOMATIC SPRINKLER SYSTEMS SHALL BE REVIEWED & APPROVED PROR TO INSTALLATION THROUGH NEWPORT NEWS DEPARTMENT OF CODES COMPLANCE.
- 28. THE FRE JAPARILS ACCESS ROJO SHUL DIRBOT DO WITHIN 159 TET OF ALL PROTOKOS OF THE DIRBOTAN MALL OF THE REST STORY OF THE BILLIANG SA MAGOSLED BY ALL APPROADS ROLLE ARROAD THE DIRBOTAN OF THE BILLIANG SA MAGOSLED BY ALL APPROADS ROLLE ARROAD THE DIRBOTAN WAY PHYL.)
- 29, FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIGH OF NOT LESS THAN 20 FEET AND AN UNDBSTRUCTED VERTICAL, CLEARANCE OF 13 FEET 6 INCHES.
- DO WITHIN LANGSCHANG AND GREEN AREAS, HEALTHY DISTINGTHERE DG"A MINNIGHT OF DIMERTIES OF A MINNIGHT OF THE OFFICE AND STRUKENESS ARE RESERVED RECORDINGS TREES, AND A MINNIGHT OF R IN HEIGHT FOR MALLI-STRUKED OF REPORTED THE RESERVED AND PROTECTION.
- THE PROPERTY OWNER OR DEPLICIPER, AS APPLICIBLE, SHALL BE RESPONSILE FOR LINE EPROPELATION AND WANTEWNER, OF ALL SITE JURISOPHENTS, INCLUDING LANGEABURY, INCLUDING HE WEDLATIONS AND AS SHOWN ON THE APPLICED. SHAN,
- ALL EXISTING TREES TO REMAIN, LOCKTED WITHIN 30" OF THE LIMITS OF CONSTRUCTION MUST BE TREE PROTECTED IN ACCORDANCE WITH SECTION 33.02-5;(B)(1)(E) SITE REDULATIONS ORDINANCE OF THE CITY OF NEWFORT NEWS, VIRGINAL
- 33. PROR TO INSTALLATION OF THE LANDSCAPING MATERIAS, AN INSPECTION WITH THE DEPARABLET OF EMBRESCHOF IS REQUIRED. PLEASE CONTACT THE SITE AND SUBMYSCHOW FRICE AT 226-8601.
 - THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE MORE THAN ONE FIRE APPARATUS ACCESS ROAD BASED ON OCCUPANCY USE, LOCATION, ETC.
- THE FIRE CODE OFFICIAL SHALL HAVE THE ALTHHORMY TO REQUIRE AN INCREASE, IN THE MANAMA ACCESS MOTHER WERE THEY ARE INAUGUALE FOR FIRE, RESCIE, OR LADDER SHAPSSTON OFFICIALITY.
- FIRE APPARATUS ACCISS ROADS SHALL BE DESCHED AND MANIFARED TO SUPPORT THE WIPOSED DUO OF FIRE APPARATUS. AND SHALL BE SUFFACED TO ACCOMMODIFE ALL MACHER BROWLE CONDITIONS, THE CURRENT MANAMA WEIGHT LIAND UTLATED FOR FIRE APPARATUS CACCULATION IS BOJOO POLINDS.)

 - THE REQUIRED TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE DETENANCE OF FIRE CODE OFFICIAL (THE CURRENT MINIMUM TURNING RADIUS FOR FIRE APPARATUS IS 29.1)
 - DEAD END FIRE APPARATUS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL PROVIDED WITH AN APPROVED AREA FOR TURNING AROUND FIRE APPARATUS. MINIMUM WIDTH OF ALL FIRE LANES SHALL BE 20 FEET UNLESS OTHERWISE APPROVED BY THE FIRE CODE OFFICIAL FIRE LANES SHALL BE SUBFACED TO ACCOMMONATE ALL WEATHER DRIVING CONDITIONS.
- AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, ETHER TEMPORARY OR APPRAMENT, SMLL. BE MODE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL APPRIES ON SITE.
- APPROKO VEHICIE KOCSSS TRB FRETIGITIMO SHALL BE FRONDED TO KLI CONSTITUCTION DE BUDDITION STILS, VADILE, ACCESS SHALL BE PROVIDED TO WITHIN THE OFFEL OF TRAPPARY OF PSHAMERT FREE DEPARTMENT CONCEINDS, SPECILE ACCESS SHALL BE PROMISED BE FILLER TRAPPARY FROM SHALL SHALL OF SUPPORTING SHALL BE ANALYSIS ACCESS BUDDITIONS, PRICE, COURS SHALL BE MANIFARED UNIT, PESANADIT FREE, APPRAILIS ACCESS BUDDITIONS, PRICE, COURSE MANLABEL.

CIVIL ABBREVIATIONS (NOT ALL SYMBOLS MAY BE SHOWN ON PLANS)

STEEL

WSHTD	AMERICAN ASSOCIATION OF HICHMAY	FW	FORCE MAIN	8	ROAD
	TRANSPORTATION OFFICIALS	DAY.	CALLON	SAN	SANTARY
10/10/	AID DELEASE/AID VACHINA VALVE	8	CALVANIZED STEEL	N.S.	SANITARY FORCE MAIN
20,000	AND CONTROLL WASHINGTON		CATE MAINE		CANTAGO COMED AD CYANIFED
HILL	AIR NELEASE VALVE	5	UNIT WENT	2	SWITHER SCHEM OR STRINESS
ALT	ALTERNATE	H	HORIZONTAL BEND	SCHED, SCH	SCHEDULE
ASSY	ASSEMBLY	¥	HEXACON	c/s	SEMER OR SOUTH
0	TV.	Q	INSIDE DIAMETER	Ø	SOUTH BOUND
ANE	SINGN	100	IMERT	8	SOUTH BOUND LANS
200	CALL VALVE	00	INDUSTRIAN I INC.	5	COURSE
5.5	Charle Drawer		- ACHT	5 5	COLUMN WARM
b	BUNU FLANGE	-	WALL STATE STATE	200	SAUME INTO
8	BLOW OFF	5	UNEAR FOOT, FEET	5.5	STANLESS STEEL
BLVD	BOULEVARD	10	LONG	STD	STANDARD
N/B	BUTTERRLY WAVE	NB	MALBOX	STA	STATION
8	CAST BON	MFR	MANUFACTURER	TLS.	STEEL
64	CENTER LINE	HH	MANHOLE	8	STDRM DRAIN
2	CHECK VALVE	MAR	MANUAL AIR RELEASE	ts	STORM SEMER
	C1166	WWX	MAXIMIN	STRUCT	STRUCTURA
100	CIERDANNE	9	MEAN SEA IPER	7,75	SUBIS CHECK WAVE
- CON	COMPOSITE	3	MEDICANICAL JOINT	118	TELEBRINE ILINITIAN BOX
COMP	CONTROLLE	1	MENTALINE SOUTH	0.01	TEST PAYEDS
CONN	COMMECTION	MIN	MANNA	2	IEST STATION
CORP STOP	CORPORATION STOP	NFI	NATIONAL AMERICAN TAPER PIPE THREAD	EA	TO BE ABANDONED
ò	CUBIC YARD	×	NORTH	180	TO BE DETERMINED
DIA	DIAMETER	NB	NORTH BOUND	108	TOP OF 5LAB
25	DRIVE	NBI,	NORTH BOUND LANE	TRANS	TRANSMISSION MAIN
ō	DUCTLE IRON	NITC	NOT IN THIS CONTRACT	TRP, TP	THICK
OPP	DUCTLE IRON PPE	NTS	NOT TO SCALE	9	UNDER DRAIN
DWC	DISMING	ON	NUMBER	300	UNDERGROUND ELECTRIC
DWGS	DRAMINGS	OAE	OR APPROVED EDUAL	0,505	UNITED STATES GEOLOGICAL SUR
ESAT	EASTMENT	8	ON CENTER	18	VERTICAL BEND
144	EAST	8	OUTSIDE DIAMETER	YDOL	VIRGINIA DEPARTMENT OF TRANS
B	EAST BOUND	USAY	CUTSDE SCREW AND YOKE	æ	WATER OR WEST
EBF	EAST BOUND LANE	PKWY	PASKWAY	MM	WATER MAIN OR MATER METER
200	ECCENTRIC	ABA	PRESSURE REDUCATED VALVE	WSC	WATER SERVICE CONNECTION
603	EDGE OF PAVENENT	n,	PROPERTY LINE	BW	WEST BOUND
d	ELEVATION	90Pg	PROPOSED	MB	WEST BOUND LANE
EW	EACH WAY	RWIN	HAW WATER TRANSMISSION MAIN	///	WEDI
EXIST. DIST.	EXISTING	RCP PCP	REMFORCED CONCRETE PIPE	U/M	WITHOUT
FO	FIBER OPTIC	BED'D	REQUIRED		
55	FIGURE	SWA	RESOURCE MANAGEMENT AREA		
PWN	FINSHED WATER MAIN	RPA	RESOURCE PROTECTION AREA		
FLG	FLANCE	2	RESTRAINED JOINT		
ш	FDOT, FEET	ROW	RICHT OF WAY		
			and and and		

CIVIL LEGEND

PROPOSED

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ELECTRIC MANDLE EDGE OF PAVENENT ELMYDON FLOW METER CATE WLVE INLET PROTECTION FROM FOUR PERIAMENT SEEDING

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REDUCER ROD FOUND STORM MANHOLE SANTARY MANHOLE TELEPHONE MANHOLE TIREE CONFER

b

UTILITY POLE
WATER WALVE
WATER WETER
CONC. SLAB OR STRUCTURE

CRAVEL DRIVENAY

TREE DECIDIOUS

1 1101 0000					L'A		
	PROFIT OF MAY LINE PROPERTY LINE SCHOOL NA SCH	W		2			- W N
DATE PROPERTY		33	CACO		310 21	2 4 2	

KEY FOR DETAIL, ELEVATION AND SECTIONAL SYMBOLS













ELEVATION REFERENCE

SECTION REFERENCE



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90% SUBMITTAL NOT TO BE USED FOR CONSTRUCTION **√**⊗ -

FEBRUARY 2013 OLD DOMINION UTILITY SERVICES 2023 HARRISON ROAD FORT EUSTIS, VIRGINIA, 23604

OLD DOMINION UTHLITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

SCALE NONE

REV GENERAL NOTES, ABBREVIATIONS, AND LENGEND

DRAWING G1.01 DATE

SHEET 2

GENERAL NOTES

- AL SENER AND WATER CONSTRUCTION AND MATERIALS SIMIL BE IN ACCORDANCE WITH THE CONTRACT DISMANDS, SPECIFICATIONS AND DLD DOMINION UTILITY SERVICES SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTACT THE DLD COMMININ UTILITY SERVICES AT LESST AS HOUSE FIRDER TO BE SHALL THE SHALL CONTACT TO SECURIFIED A PRES CONSECUENCY METHICS, ALL WORL SHALL BE SPAKETT OR SPECIFICIAL BY OLD COMMININ UTILITY SERVICES MERICIPIOS.
- HE PRACTICE AND STATEMENT OF LEAD DARKING HUTT SPACES OF GOLDANG, NO AGE CASES.

 PURLIESE, HE CORNECT DOUBLYS DO HIS CARANTE RE CENTERS, MAN-LESTING, OF LOCKING HE LIGHT SPACES AND AGREEMENT OF THE LIGHT MAY DESCRIBE AND AGREEMENT OF THE LIGHT MAY DESCRIBE OF THE CORNECTION OF THE LIGHT AND AGREEMENT AND AGRE
- THE WAS CONTROLLED USING USING THE ADDRESS HANDS AND ADDRESS ADDRESS AND ADDRESS ADDRESS AND ADDRESS A THE CONTINUED SPALL NOTITY MESS UTILITY (1-800-592-7001) AT LEAST 72 HOURS PROR TO STARTING CONSTRUCTOR ACTIVITIES REQUIRING EXCAMATION.
- DICHEGOL CREES HANT MITT SERVEN OF THE DIRANGES OR ARE SHOWN APPROXIMEDED. THE CONCESSION OF CONTROL THE CHARGE AND THE CONTROL OF SERVICED IN CHARGE AND THE CONTROL OF CHARGE AND CHARGE FEATURES FROM THE THE CHARGE AND THE CHAR CONTINUES SHALL NOTIFY GLD DOMINON LITLITY SERVICES 2 WEIGS PRIOR TO THE INEEDSEPTION OF ANY SERVICES, SERVICE INTERNETIONS SHALL BE KEPT TO A MINIKAN.
 - THAL ACCEPTANCE OF THE WORK BY THE OLD DOMINION UTILITY SERVICES SHALL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED FLANS IS COMPLETED.
 - THE CONTRACTOR SHALL BE RESPONSEE FOR REPRING AND REPLACHD ANY DISTING STRUCTURES, LANDSCHONG, ETC. SHAMAGID ON REMONED DURING CONSTRUCTION AT THE CONTRACTOR'S DIPENSE.

AS DETERMIND BY GLD DOMINON UTLITY SEPINCES, NAY GEFECTINE, FALLITY, CANCISCO ON BADGIN SIGNALIX, NORTHER MANGES DE CAUDE A GETTINE AS, I RESULT OF THE ASSULT OF THE WAS CONTINUED WHILE I BE AND ON HOME FOR SUCH MISS.

14. CONTRACTOR SHALL DIRECTO EXCISION CONTROL RENIES AND NETHOUS AS REQUIRED. CONTRACTOR SHALL FROM THE METSCAN CHORE, AND SHALL HOUSEN WITHOUT A METSCAN CHORE ONCO THE STREETS OR PROPERTY. CONTRACTOR'S WIGHLESS ON PROPERTY. CONTRACTOR'S WIGHLESS ON PROPERTY. CONTRACTOR'S WIGHLESS AND SHALL SH

- THE CONTRICTOR SHALL COMPLY WITH ALL LOCAL, STATE, VOH, DED, AND FEESTAL REQUIREMENTS APPL TO THE CONSTRUCTION OF THIS PROJECT.
- SPOLID THE COMTRACTOR COME, ACKNOS DOSTING, CONNECTIONS TO THE WATERMAN THAT MEDR NOT SHOWN.
 NE RE-VANG, 16 SOLL 1992PF THE LUE S. ACTINE. IF THE LINE IS ACTINE, 16: SHALL RECONNECT THE STANKET. TO THE PROPOSOD, WATCHAMM.

WITHOUT AND SEE CONDITIONS

- ALI WAYST IN PACTO AREAS SHALL BE ANCHORED, WAYS 8" AND LAKERY SHALL BE ANCHORED HIGHBALE OF LOCKTON (SEE DETAIL SHEET C-1.3).
 - 13. THE CONTRICTOR SHALL CODESIANTE WITH OTHER STE CONTRICTORS DURING CONSTRUCTION AND FOR TRE-IN $\pm 0.000\,\mathrm{MeV}$
 - ALL POST NOCACIO NAVES SHALL COME EQUIPPED WITH TAMPER SMICHES. THE CONDAIT SHALL BE "BY CHEESE", COORDINAT WITH STEE CONTINCTOR. EROSON CONTROL & WORK AREA PROTECTON AND MAINTANNE
- UMLES DIFFRES MODULD, AL VICENTIF, NO STRUTUAL DRISON NO STANDES CONTROL PARTICLS SHALL BE ODSCRIPTED NO MANDERS IN ACCORDANCE TO THE MINIMAL STANDINGS NO STRUTUTION OF THE WINNESS AND STRUMET DOPINE, WARROOK.

 - ALL EROSON AND SCIAMON CONTROL METGRESS ARE TO BE FLACED ROOM TO OR AS THE FRIST STEP TO LIAD DISTURBING ACTIVITIES AND SHALL BE WASTE TRACTIONAL BETDEC LINGUIDE LIND DISTURBINATE LIADS PLACE.

DAMPET AND ASPINUT

- ALL DISTURBED AREAS ARE TO DRIVE TO SEDIMENT CONTROL WEISLIES AT ALL TIMES DURING LAND DISTURBED, ACTIVITIES AND DURING SITE DEVELOPMENT UNTL. THAN STARLIZATION IS ACHILYED. CONTRACTOR SHILL PLACE ADDITIONAL SILT FONCE AROUND ALL SOIL AND ORWEL STOCKPILES.
- DURNAL CENTERNIC OPERATORS, WATER SHALL BE PRAMED INTO AN APPROXED FEETING DENCE, EFFILIDIT SHALL BE DECOMPAGIO IN A MANNER THAF DOES NOT ADVESSELY FFECT FLOWING STREAMS, OH OFFI-STT.
- CONTRACTOR SALL INSPECT ALL EROSON CONTROL MESCUES PERIODOLLY AD AFTER DUP RANKLI, PUBRI. RECESSARY REPINES OR LOLANGE. TO MANAN IN EFFECTIONESS OF THE EROSON CONTROL DEVICES SALL IE MADE MATCHELY. AT NO ADSTORM, COST TO THE CONTRACT.
- At the completion of construction are upon the estrelishment of vereintial, all serians controls shall be removed.
- UNESS CHERWISE MYES, UNCREASOND UTUTY LINES SAUL BE NISTALED IN ACCORDANCE WITH THE POLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITISMS.
- NO MORE THAN 200 LINGHE TEST OF THEODY HAVE BE OFFICED AS ONE THAN CONTRIBUTIONS OF THE PROPERTY OF THEODY HAVE BE ACCORDING TO A CANOMICE WITH THE CONTRIBUTION SHALL BE ACCORDING TO A ACCORDING WITH THE CONTRIBUTION SHALL BE ACCORDING TO A ACCORDING WITH THE CONTRIBUTION OF THE COUNTRIES SHALL BE COUNTRIES WITH.
- 90% SUBMITTAL NOT TO BE USED FOR CONSTRUCTION

OLD DOMINION UTILITY SERVICES 2002 HARBSON BOAD FORT EUSTS, VIRGINIA, 23604

WHITMAN, REQUARDT & ASSOCIATES, LLP 1850 Metchants Walf, Solet 100, Newport News, VA agloof

OLD DOMINION UTILITY SERVICES
NICOSPORATED
SER ANGENISACION
FOR LUTILITY SERVICES

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PERRUARY 2013

SCALE NONE

- IN CARSAL, ALL EDISCON, AND STANEIT CONTEX, MESSINES SWIL, RE OFENCED GAIV, MO ATTRE ECH SOMETIANT RAWNILL, THE CONTINUENCE SPALL REVOYAN THE DETAILED MANIFORMER, RIGHCHINGS OUTLINED BE DETAILED WE PRINCIPARE.
- A RESPOND CONCENS, STREAMERS SHALL IS CLARING SHE THE REGAL STORY OF WARRANGE AND SHE CHARLES SHE CHARLES WE ALROSE OF RESIDENCE AND SHE CHARLES WE SHOULD SHE CHARLES S
- CONTRACTOR SHALL MANTAN DOSTING STIRGANS, DISTORES, DRANGE STRUCTURES, CLAUFITS, AND FLORS AT ALL TIMES DURNOT THE WING CONTRACTOR SHALL TIMES DURNOT MAD PROPERTY DAMACE WHICH MAY OCCUR AS A RESULT OF THEMS OF DAMATING ACCURATE ORIGINATE.
- ALL PPEX, DRAWLE MLTS AND OHER STRUCTURES UNCORRED DRAWS CONSTRUCTOR SAML ER NIGHTER IF QLD DRAWCH UTILITY SERVICE SECONE DRAWS DE MONELLE, QLD DAWNIN UTILITY SERVICES WAS RELINES CONWINCTOR, AT AN ADDITIONAL COST, TO DAVICES AND RE-CORRE SLOT STRUCTURES IF THEY WAS BELLY BUCKLILLED, OR BURED WHINCH SLOT RESPECTIVE.

- NATIC AND SCHOOL

- - THE CONTRICTOR SHALL COURTY WITH THE VIRGINA WORK AREA PROTECTON MANUE, AND THE MANUE, ON LIMITORN TRAFFIC CONTROL COVERS.

CONSACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, BOADS, AND OTHER APPROVAL RELATED ITEMS IN ACCORDANCE WITH THE COMPINET DOCUMENTS, LOCAL, STATE AND FEBSIVE POLICIES.

AND SECURITY OF SE

ANY UNISJAL OR UNANTICIPATED SJASLIFYCE CONCITING SHALL BE MAETIATLY REPORTED TO GLO COMMIT UTLITY SERVICES.

CONTRACTOR SHALL VEREY ALL DIRENSONS, BLANDONS AND LICORIDOS FRORS TO BECANNIG WICH, MARCINETE MOTIFY OLD DOMANNU UNITY SEMENTS OF HIS DESCAGE IN THE FEER THEIR DISSIPLY MOTIFY SEMENTS OF STREAM OF THE ANS AND SPECTICIONS.

ALL WITBALS AND RISILLATON DETAILS SHALL CONFIDM TO DUD DOWNON UTUIT SERVICES STAND. AND ALL CITER, APPLICIBLE ORDINANCES.

CONFACTION TESTING AND INSPECTION

- GOTOPHOL, NOVICHO PARL, MYROT, SABONO, NO DUS FIL LATE THE DIGHES OF CHANGING CHANGES AS LE FELL DERBOY THESE WERE SELL FELL DIGHES THE SALE OF A DIGHES OF THE DIGHES OF

ALL WATERAL RISCE FORMS SHALL BE CLEAN AND FREE OF ALL RODGS AND OTHER LLODGE GEBIES, 518-6165E FORMS. FORMS.

CONCRETE SHILL NOT BE PLACED UNIESS THE ARRESTMENDING IS AT LLAST 40 TAMBENIET IN THE SHAZE AND RISMS, CONCRETE SHALL NOT BE PLACED ON FROUTH SUBGRAGE.

DISTING ASPIALT COLOREIT PRIMIDED SHALL RE SAW CUT AND REDOMED FOR THE SPECIFICATIONS. REMAIN THE CORE IN SUCH A WARREN OF TO THAT THE RELIC ON DISCUSSES ANALOST MEMBERS. TIGGS SHALL RE CLEAR AND VERTICAL, MA SHOET RECTINGUAR SHAP AND ALL CUTS SHALL RE PARALEL OF

4. ALL DISTING CURRS, CLIRB & GLITTER AND SOCIMUL TO BE REJUDIED, OR DAWKED BY THE CONTINCTOR SMULL BE DASTN CUT TO THE NEMEST JOHN. CONCRETE SHALL NOT BE PLACED UNTIL STEEL BOWILS HWE BEEN INSTALLED IN EXISTING, CONCRETE IN ACCORDANCE WITH THE WIGHAN GENAFINENT OF TRANSPORTNION STANDARDS.

PERFORMANTO THE DRECTON OF TRAFFIC.

DISPOSAL OF ALL DIDCSS. MATERIAL IS THE RESPONSIBILITY OF THE CONTRICTOR, NO SHALL BE PERFORM.
 IN ACCREMACE WITH ALL APPLICABLE FERENAL, STATE AND LOCAL REGILATIONS.

CONSULTOR DHILL CROSCO CHAT EPECULT AI PRESCENCE HIG CATELL LISES, TO PROJECT FORMER PROMICE PROMICE TO PROJECT OF SHALL SERVICE PORT AND THE CONTROL OF SHALL REQUIRE AND CONTROL ALL NO LOTIONAL CASE TO THE CHARLE CONTROL DHANCE OF ALL REQUIRE MINES OF CHARL SCHOOL CONTROL OF SHALL SHALL SHALL SERVICE CHARLES SHALL SER MANTHED AT ALL BRIES.

A. HE CONTRACTON SHALL PROVICE PERMANNI SEEDING FOR AL, BUT NOT LANTED TO, DISTURBED LAWN, PROXIS LIVED, AND VECTOMINE, UND DITCHES, ETC.

B. TIPCHAS, SEEDING HEIZ, SEFLICER AND TREGOLI PREPARTON REQUIREDBITS ARE AS SPECIFED IN THE CONTRIBET DICOLARIES.

TO TUPSOL, AND SEEDING REQUIREMENTS ARE AS FOLLOWS.

CONTRUTOR SHILL AT HIS DEPONS, MANTAN THE WORK SHE IN A CLEM AND ORDERY APPEARANCE AT ALL TABLES ALL SESSE AND SHENUS METERN COLLECTED SHALL BE DISPOSED OF OFF THE WORK SHE SPECIALISTICS, AT ISS DEPONS.

 DOSTHO LUMING, INSTEX, SHIGGES, FENCES, UTLATES, CALVERST, MALLS, MALLS, DOMERNES, POLLES, SDOS, ROPI—CHE, MAXIMARITS, MALBOOTS AND THE JUST SHALL BY PROTECTIO TROW, THANKE, DARROF THE WISHA, ANY DAMING, DALSON TO SLOW TIMES SHALL BY REPARED ON REPLAKED BY CONTRICTION AT NO ACKNOWN, COST. 13. THE CONTRACTOR SHILL RETWO OR REFUCE IN LINE KING MY LANDSCHONG DISTURBED BY CONSTRUCT ACTIVITIES.

- 1. PROBLED REMOVAC ANY TREES, CONTRACTOR SHALL MEET OLD DOMNOW UTILITY SERVICES TO REMEN THE LANTS OF CONSTRUCTORN AND DEFINESCON TO REMOVE TREES RECURRED TO DO THE WORK.
- 2. TREL AND PLANT BOOTS OF BRANCHES THAT JANY INCIDENCE, WITH THE MORK SPALL BE TRANKED OF CUT ONLY WITH THE APPRIXED SHANDS SHANDS SHANDS WITH SWANDS WITH SHANDS WITH CONTINUENCE AN INO ADDITIONAL, COST.

- THE CONTRACTOR SAME MANTAN VEHICLEAR AND PEDESTRAIN ACCESS ALONG THE PROJECT ALIGNICAL
- THE CONTROLING SHALL MANTHAN DOSTING THAT'DE PATENDS WHICH POSSBELL IF CONGSTRUCTURA ACTIVITIES INTERESTORY. THE CONTROLING SHALL ENTER THAT CONTROLING SHALL SHAL
- CONTRICTOR SALL INDITY OLD DAMENU ITELITY SERVICES 2 MITCS IN JUNIOR DE RECORDS ANY DEFENDED BY PROPERLY IN STREAM SERVICES IN MITCH (12) HOUSE IN MY 24 HOUS PRINCES IN MITCHES IN MY 24 HOUS IN MY 24 HOUSE INSTRUCT.
- THE CONTINUOUS SMILL DEBLOR AND SLIBATT A TRAFFIC CONTROL, PAUL WESSE REQUIRED DUE. TO PRETURE PROVINCION THE CONTROL PAUL AND INCLUDION THE PROPOSED SCITOL PAUL AND INCLUDION THE PROPOSED SCITOL PAUL ALSO SE IN ACCORDANGENCE CLOSES SMALL AGO SE IN ACCORDANGEN THE MANUAL ON LUNCHON TRAFFIC CONTROL SCHOOLS (LUISSE STISTOS).

CONTRACTOR SHALL EXCHANTE UNGURBALE AND/OR UNGATISFACTORY SOL, MYTHINGS ENCOUNTERD AS DRECTED BY SECTION ON INSPECTOR.

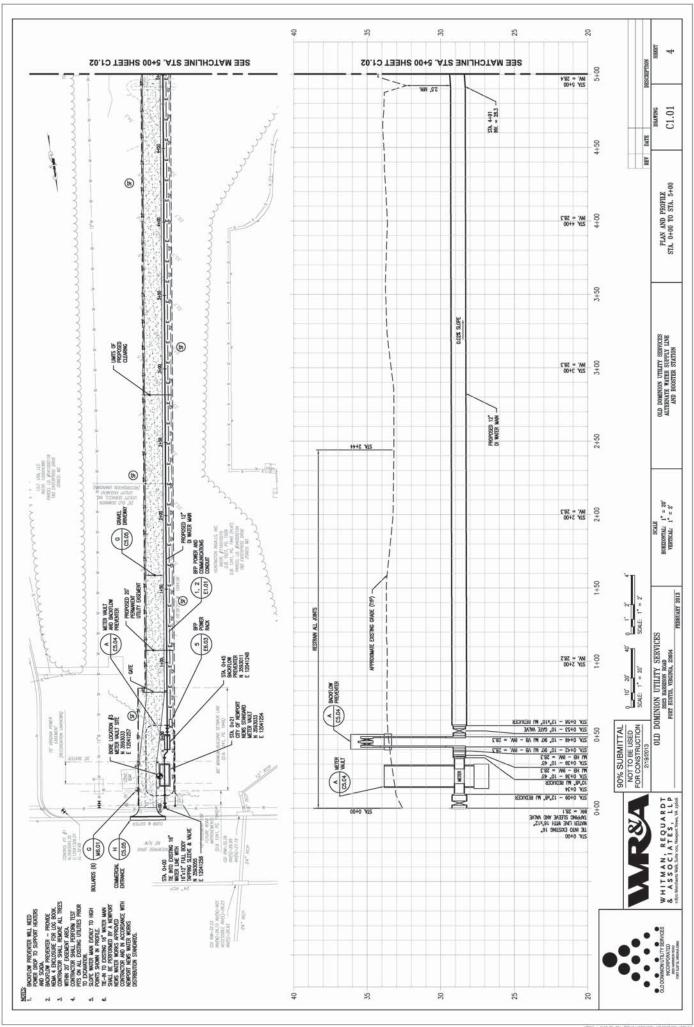
- THE DWICE SHILL PERSONN COMPACTION TESTING AT INCREMENTS OF 100 (F OF TRENCH PER LIFT)(B)
- CONSISTER SHILL CONNECT TION LIKES OF TILL MITTER, ON SHOTH IT IN DAT LISS THAN THE TRILLWINE PROCESSINGS OF THE WORMS OFF SCHOOL NEW SHORES THE DISCUSSINGS OF THE WORMS OF SCHOOL SCHOOL STANDARD SHADE SHOULD NOT SHOULD
 - A. SOS BENEATH AND WITHIN 10 FEET OF BULDING AND STRUCTURES INCLUDING THOSE SHOWN TON FUTURE CONSTRUCTOR.
- 8. DAS BORJON PRATURNT, WAYS, ROUGHNYS, AND ROAD SYGLIDIES, INCLUDING THOSE SYGNM TON FUTURE CONSTRUCTION.
- C. 85% IN CTHER UNIFRED MEAS.

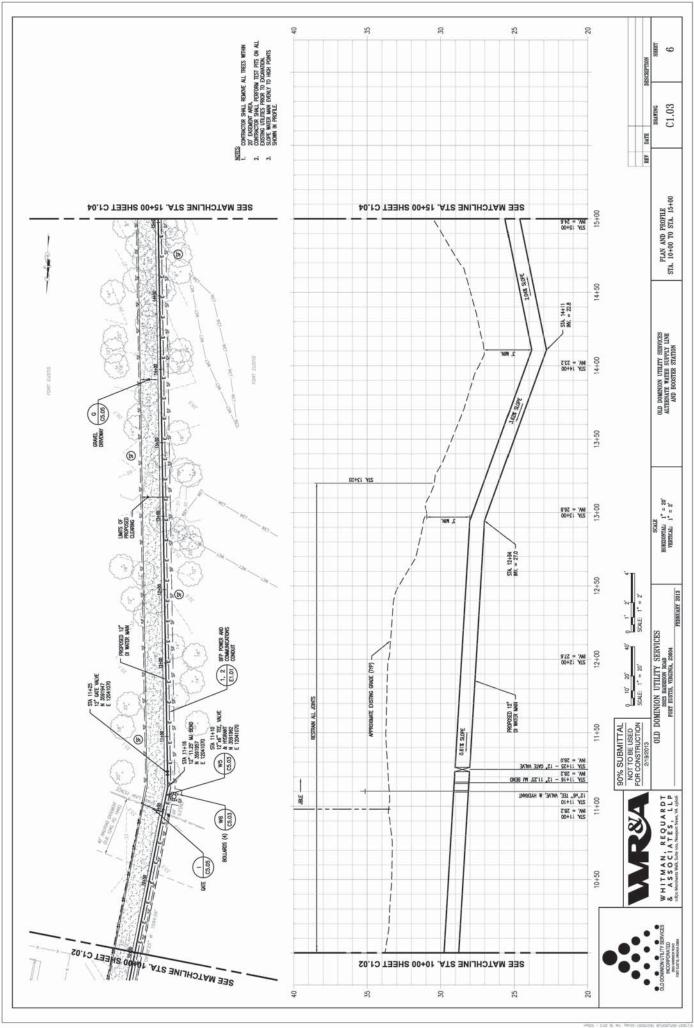
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

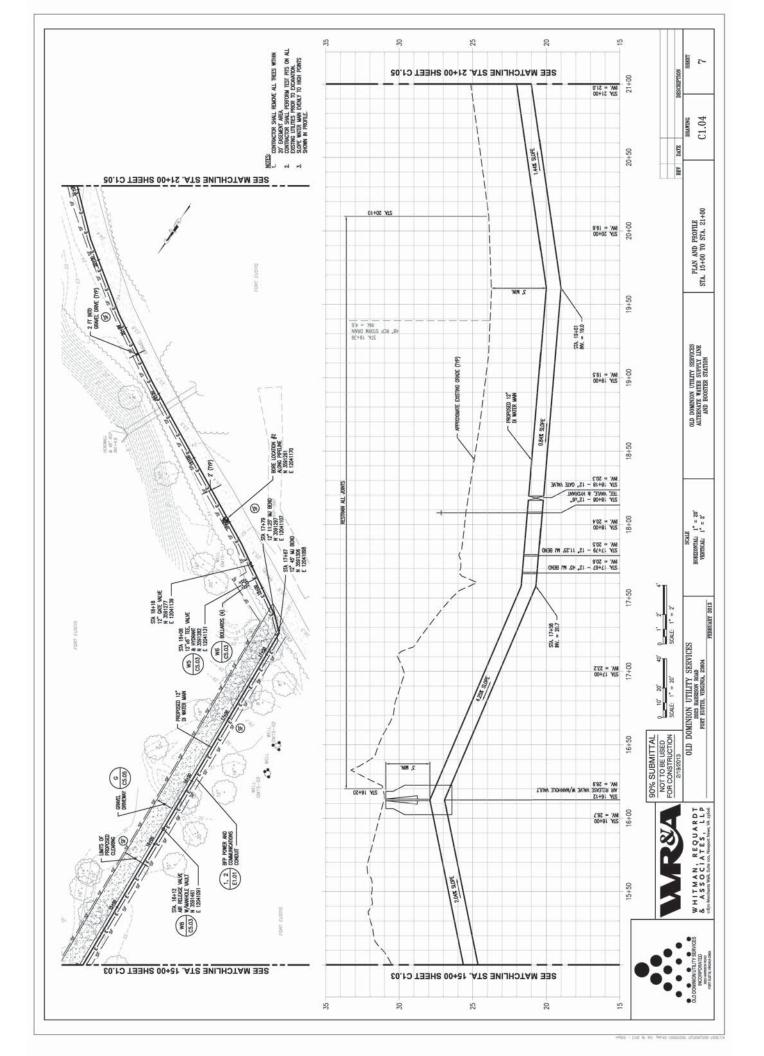
OLD DOMINION UTILITY SERVICES GENERAL NOTES

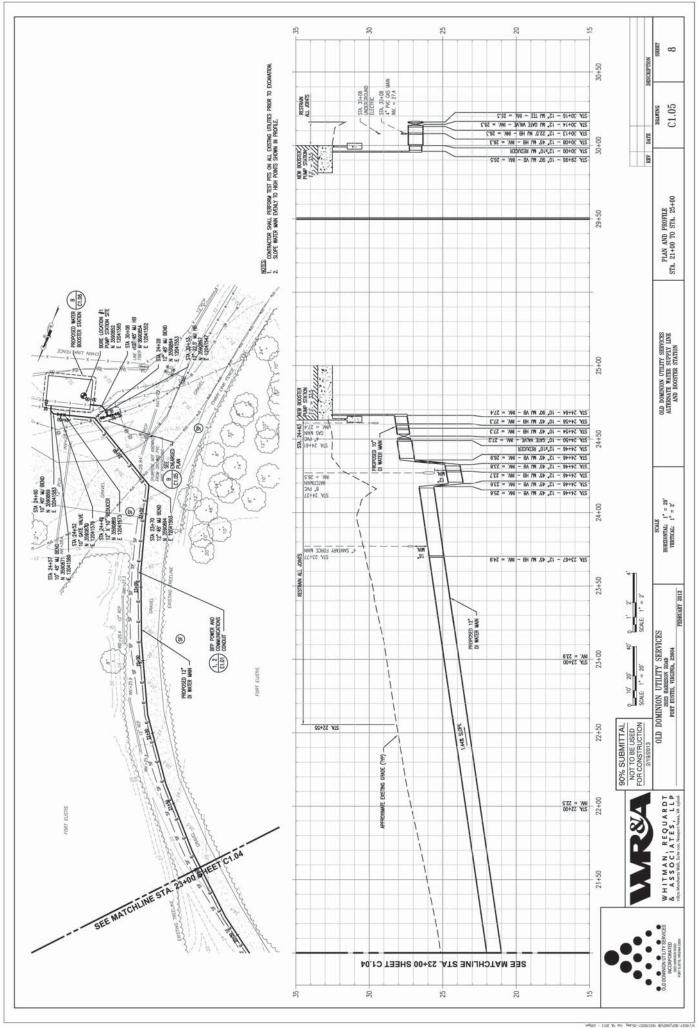
G1.02 DRAWING DATE

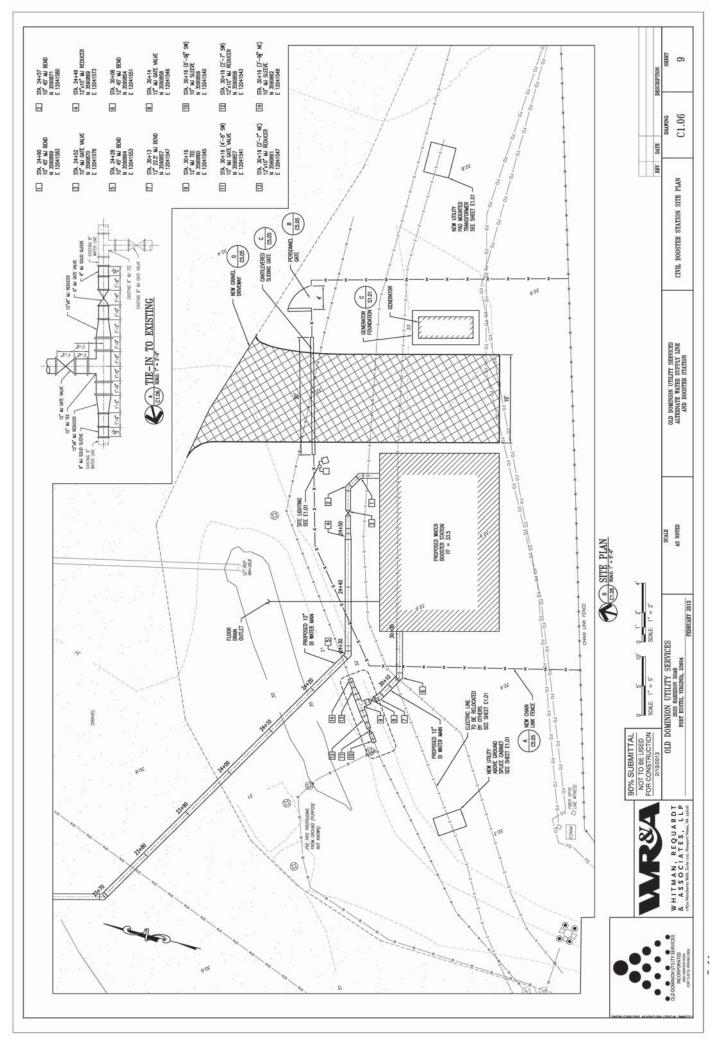
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PROJECT DESCRIPTION

EXISTING SITE CONDITIONS

GENERAL EROSION AND SEDIMENT CONTROL

PRODUK MIR STANKH CONTRO, (TOZ) MUCIESTE MATT RE PAUCH 1980 YE, OR AS THE FREST VANOVOR ET RETURNED AND SO STANKHOUSE AND SO STANKHOUSE AND RECEIVE TO ALLOW TO STANKHOUSE AND SOUTH SOON SEES, STANKHOUSE AND SOUTH SOUTH SOON SEES, THE STANKHOUSE AND SOUTH SOON SEES, THE SOUTH SOUTH SOON SEES, THE SOUTH SOU

ADDITIONAL ESC DEVICES ARE FOUND AEDESSARY DURING CONSTRUCTION, THEY MUST BE INSTILLED AS PRECED BY THE CITY.

JALES CHEINGE, APPRIND BY HE CITY NOFICTOR, ALL RINOF MUST DIANN TO A SCOMENT BIGN OR TRAP DURING ALL PHISES OF CONSTRUCTOR.

ILL ESC DEVICES MUST BE INSTALLED AND MINITARED IN ACCORDANCE WITH THE LATEST VERSION OF THE WIGHOUR ENDOOR AND SEDIMENT CONTROL, HANDSCOK AND THE VIRGINA ENDSON AND SETUMENT CONTROL, PRESENTIAN.

DENATIONS OF DICHARD TRENGES, SETANOST BISING/TRUES, T.C. MIST DE DOME NI ACCORDANCE WITH TOD. & STICL, J.M. — CARMETINGS STORTHOLE, MILE LASTS VERDON OF THE "MISTORY ROOM TO SEDIMARI CONTIGO, HANGROOK, THE CITY MISTORIAN MIST APPROACH THE MISTORY TO DECENHAR

EROSION AND SEDIMENT CONTROL SEQUENCE

- NO LAND DISTURBING ACTIVITIES SHALL REGIN UNTIL AFTER THE ISSUANCE PENERT AND INSTALLATION OF EROSON AND SEDMENT CONTRICL DEVICES.
- INSTALL CONSTRUCTOR ENTRANCE, SILL FENCE, SAFETY FENCE, AND OTHER ENCISOR AND SCENARIO CONFIGU. MICKENESS AS AS SHOWN ON THE PLANS. HONDAE EXISTING DEBRES AS NECESSARY AND HALL TO APPROPRIATE DISPOSAL STE.
 - HOW COMPLETON OF NEW AS STATED IN CENERA, NOTES, APPLY PERMANENT SEEDING AND RESTORE ALL DISTURBED AREAS.
- AL POSDIA CONTRO. DENCES SAUL BE MANTARÉT HIGODISPLIT CINGENETICO FOR THER METADO RUBOCE. SOULD CHOUSES RAL DE RECOME METERITAE, HE'S SAUL BE REPUED WITH THE METADAS AS DESEND RECOSSAPÉ OF THE CONTRO OF BOARDA.
- WHEN DISTURBED AREAS ARE STABLIZED TO THE SATESPACHON OF THE INSPECTIONS, AND THE DIAGNETS BRAINE ALL TRANSLARY DISCIONA AND SCHWENT CONTROL DIAGNETS.

EROSION AND SEDIMENT CONTROL MEASURES

TASTAS ORBORRAS, MATARTEL, ALL MICELANE, AND STRUCTING, DESCOUN MAY SEMBER CONTROL MAZACES SHALL BE CONTROLLED AND MANUNES ACCORDING TO THE MANUAL STANDARDS AND SPECIFICATION OF THE LYMINAM STANDARDS AND SPECIFICATION OF THE LYMINAM STANDARDS AND SPECIFICATION OF THE LYMINAM STANDARDS AND SPECIFICATION LYMINAM STANDARDS.

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VEGETATIVE PRACTICES

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STORM WATER MANAGEMENT

MAINTENANCE

NI CORENE, ALL ENDSON AND STINGON CONTROL, MACRIESS WILL BE CHECKED DARY AND AFTER DOTS
CONTROL MISCORES SHALL NOT BE REDACTED THAN THE MACRIC PROCESS HOW TO SHARP THE SHALL SHOWN THE BE PROCESS TO BE REPORTED WITHOUT THE APPROACH OF OFFICE WAS COMMON THAN THE CHECKED TO PRINTING HER

- THE SET FONCES WILL BE CHECKED REQUIRBLY FOR SEGMENT CLEAN CLET
- ALL SEEED AREAS WILL BE DEEDED ASSIGNARY TO SEE THAT A COOD STAND IS WANTAMED. AREAS SAULL BE FEBRILZED AND RE-SEIDED AS MEDIED.

ES CAN BE REMOVED WITHOUT THE APPROVAL OF THE CITY.

NO EROSION AND SEDMENT CONTROL, MEA SILT FENCE NOTES

POSTS FOR SET FRACES SALL BE ETHER? 2 MCH DAMETER DAK. 4 NCH DAMETER PAKE OR 1.33 FOUNDS THE LADDE FOR ETHER POSTS IN EACH WASHING OF STEEN IN LINGUIL. STEEL POSTS SHALL HAVE, PROLECTIONS FOR METIRINAL WHILL DIFFEL.

MICH KITRA STRENICH FLUIR FABRIC AND CLOSER POST SPACING, ANE LUSDI, THE WIRE MISH SUPPORT FOWE. MAY BE DIAWAYED. IN SUCH A CACE, THE FLUIR FABRIC IS STAPLED OR WRIZE DRECTLY TO THE FOST.



WHITMAN, REQUARDT & ASSOCIATES, LLP 1850 Metchants Walf, Solet 100, Newport News, VA agloof

City of Newdort News EROSION AND SEDIMENT CONTROL GENERAL NOTES:

- IN CONTROL ON LONY WITH CARROLL MAS DESILATED OF THE TO SERVICE WAS THE CONTROLLED ON THE SELVEN AND ALL WASHES AND ALL CONTROLLED ON THE SELVEN AND ALL CONTROLLED O
- - A COPY OF THE APPOYDED DISSISTA AND SCIDILENT CONTROL, PLAN AND LAND DISTURBANCY, FEDWIT MUST BE MANTHAND AT THE STIT FOR THE GUARDISM OF ALL CONSTRUCTION AND LAND-DISTURBING ACTIVITIES. ALL APPROPRIES LOCKOR LOTING, LANGES SOLO ALL BILL OF LEATH IT PROTECTED, STORT, CONSULTOR AND ALL STORT CONSULT CONSULT CONSULT AND ALL STORT CONSULT CONSULT AND ALL STORT CONSULT CONSULT
 - HE GENERACES BULL CONTINUE, ANNOHAN ALL MONTHS AND SERVE DISE SERVED BY ELECTRONIC ANY ADDRESS WAS ANY AND ALL ROCKED BY ANY ANY ADDRESS WAS TO BE DECORATED BY ANY ADDRESS WAS TO BE ADDRESS OFF. TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ADDRESS OFF. TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO BE ATTHORDED TO THE SERVICE OF ADDRESS WAS TO THE SERVICE OF THE SERVICE OF
- THE CONTRACTOR WAY NOT CHANCE OR ALTER ARY OF THE ARMONDS MOSCINESS WITHOUT FREST NOTIFINES THE COTY'S INSPICTION TO DAY SO MAY RESULT IN A MINY, SIND AND/OR REDUCATION OF THE LAND DESTAURANCE FERMING. DURING SCHIEDING OPERATORS, WATER SHALL BE PLAMPED INTO AN APPROADD PLEISING DEVICE.
- HE CORRECTOR SHALL DOSTRUCT HAS WARNA ALL WILKSONS TO PREVAY SOL TICHO DOSANO OND ALALCAY PROSPET.
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- TILIPONEN AND PROMUNES SELDING DESIGNEDS SPALL BE, MERCED WITHIN SPEEK (7) JAYS AFTER RECONDE FRAIL GROSS OF THE PROMUNES OF OWNER, CONTRACT OF THE SELDING OF ORIGINES HAW THEIR (20) DAYS OF UPPN COMPLEXION OF SHADORD OPPLANCES FOR A STEEK MAIL.

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NUTURE, CHANNELS SHALL BE ANALYZED OF THE USE OF A 2-YEAR STOWN TO MEBRY THAT STORMARTER WILL NOT CHERCIP CHANNEL BANCK NOTI CAUSE EROSCAN OF CHANNEL BED OF BANCE. ALL PROYDULT CONTINUED MAN-MOE OWNELS SHALL BE ANYTOOL IF THE UTE OF A 10-104F STOM TO STOM THE GOE OF A 2-104F STOM TO SOUNCEINE. THE STOM AND THE GOE OF A 2-104F STOM TO SOUNCEINE. STOM AND THE GOE OF A 2-104F STOM TO SOUNCEINE.

PIPES AND STORM STREET SYSTEMS SHALL BE AMAZED BY THE USE OF A 10-YEAR STORM TO VERRY STORMATCR WILL BE CONDAINS WITHIN THE PPE OR SYSTEM.

F COSTNO, NATURA, RECEINAC CHANGES OF PREMACELY CONGREÇES WAY-MICE. DHANNELS OF PPES ARE NOT ASSOURT. THE APPLICATION SPINLL.

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- 11. A MERNA STON MERITE FEMT (MEN) USE, IR SEGORED TO NON-CONTROLLED OF TO NON-CONTROL OF CONTROL OT CONTROL OF CONTROL O A MO WITHOU ME, IT E HALLD SO, REMOVEDTD TO LET, RAR OPPOPADEL EDDOM HAD STIMBOT CONFID, MISSES NATULLI DAN WANAMED HAUDO ALL STODENLES AND STIMBOT FOR SO, ON B ALL WITHOUT DO IN HALLD ON SERVEDING DEFERRING AT RETIRED AND THE SO, AND STIMBOT SO, AND STI
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City of Newport News EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS:

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3) MPHONE THE DAMMELS TO A CONCITCH WHERE A 15-15M STORM WILL NOT DISTRIPE THE BANKS AND 2-15M STORM WILL NOT CALSE, ERISSON TO THE CHANNEL RED OR SANKS, OR

TREE PRESERVATION AND PROTECTION ®

) PROVICE A COMBNETON OF CHANGE, MPROVIDENTS, SCHMMETER DETENDED OR CHER MOSSINS WHICH SATERACTION TO THE FAMIL-MPRODING AUTHORITY TO PRECIFIE COMMERCIAL BROSON.

- A ROBANDE VECTURE CORE SHE. RE DISHOLDED ON DOWNED WILKS NOT TORONGE FORWARDS SAULZED. TO FROM ON VECTURED SHE. THE CORCENSE DESIGNATION AS A COMPANIE SECURISED DATE A GROUP CORE. TORONGE THE CONTROL WHITE DOORS TO SHOW, AND THE INSTIT PRODUCE—<u>LEE ARMA, FOR MEDING, DANDALL</u>

300 GM

- SIGNAM TANTA NO SIGNAT DAING SANT DE OTSONO AND CANDISCITO DAIGH FOR THE TIME OF DAIN. SEE AMO AND CACOLADAS OF SERVING SERVINGES.

and the same CORRECT TRUNK ARMORING

CONSTRUCTION OPERATIONS RELATIVE TO THE LOCATION OF PROTECTED TREES

- COT NO TIL SCREES SHILL BE DISDRED AND CONCRIDERED IN A MANNEY BANK (1) YON DY MILL WANTER DROVEN, SCHEET AN ARE INDOD TO BE DECIDED CONSISTANT WHIN ONLY SCHEET AND THE PROBLEM IS CROSSECTED.
 - CONCENTIALED READTH SHALL NOT FLOW DOWN CUT ON PLL SLOPES LINEEDS SLOPE DRAW CONTAMED WITHIN AN ACCOUNT TEMPORARY OF PERMANENT CHANNEL, FLUNE, OR SLOPE DRAW
 - MEDICIDE MATER SZEPS FROM A SLOPE FACE, ADDUMIN PROTECTON SHALL BE PROMOSE.
- ALL-TOW RIGHT RETS. 164 ME WAS DESIGNED AS DESIGNED AS ALL RESIGNED OF THE RESIGNED AS THE PARTY WAS CARREST OF WEST TOWNED OF THE RESIGNED AS THE PARTY WAS CARREST. THE RESIGNED AS TRANSFER AS THE PARTY WAS CARREST. THE RESIGNED OF THE RESIGNED AS TRANSFER AS THE PARTY WAS CARREST. 65'06" ALRY ONGRESSIO STORMANIS CONFUNC. OWNES OF MAN ART REQUED STROOMS OF STRANGEN OWNES. OF WASSES STORMS OF WASSES

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90% SUBMITTAL NOT TO BE USED FOR CONSTRUCTION

OLD DOMINION UTILITY SERVICES 2002 HARBSON BOAD FORT EUSTS, VIRGINIA, 23604

NONE PERRUARY 2013

SCALE

OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

TRIANGULAR BOARD FENCE

CORRECT METHODS OF TREE
FENCING

- In APICOND SWIL PROMOC (VIDING) OF PERMISSION TO MAIL THE MATOCRAPHS.
 ALL PROMOCOC MATOCS SWILL SWILD IN THE DISTRIC WITHSHED NOW THE UTIMATE STATES AND THE ULTIMATE
 TOPELLOWENT OF THE STAKES PROJECT.
- BEDY A INT BRITICODOS, MAST ISC CHOSOSS IN CONSTRUCTION VIOLICIS WORR THAN THE IN ANY SEA-MORPH FORCE, A STRUMMENT VIOLIAN STROM DIOSSING CONSTRUCTIO OF MONITORIA WITHIN SHALL IS FRONDED. SEE SECULAL DAS BALLS.

THE RED AND BANKS OF A WATERCOOKSE SHALL BE STABLETS MAKEAUTLY AFTER WORK-DISCRIPTION UTILITY LINES SHALL RE INSTILLED IN ACCORDINGS, WITH THE FOLLOWING DEPON.

6. NO MORE THAN 500 LINEAR HELT OF TREACH MAY BE OPENED AT ONE TIME. S. SYCHATES WITERLE SAIL BE FLUCED ON THE UPHIL SCIE OF TRENCH

- (i) If the APPACE CHOCKS and primal hand rector strongers of ESTECKE, APPACE SHLL DITTORS APPACE FROM HELD CHOCKS APPACED TO THE OFFICE APPACES APPACED TO THE CHOCKS APPACED TO THE OFFICE APPACED TO THE APPACED TO THE OFFICE APPACED TO THE APPACE
- CUFALL FEWA CUEDATON FACULT SHALL BE COCHHOLD TO A RECOME CHANGL, AND EMERY DOSHVERS SHALL BE FANCED AT THE CUFALL OF ALL DETENDED ACADERS, AS INCESSARE TO PROMIC A SHALLED SHAZDEN FROM SHALL TO DIE RECOME CHANGL.
- ALL ON-STE CHANGES WEST BE NEWED TO BE ADSOUNTE
- NORDERO VOLUMOS OF SHEET FLORES THAT WAY CAUSE SHOSKIN ON SEC SHALL HE DRESTED TO A STABLE CONTEX, ACCOUNTE DANNEL, FIVE OR PIPE SYSSEM, ON TO A DETENDEN FACILITY

LUTLAT FICE DESIGNED A SAMEDING SHALL BE FLITHED OF MOSED SHOULD ADMINE SENENCE SENENCE OF SEE PROPRIE.

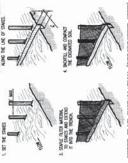
REDUCES SHILL BE REPER

A RESTABLIZATION SHALL BE ACCOMPLISHED IN ACCOSOMICE WITH THESE ASSAULT

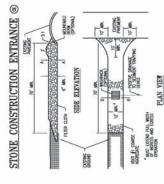
A APPLICABLE SAFETY RESULTATIONS SHALL BE COMPLED WITH

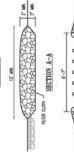
ALL MURGINES LISED TO PROTECT PROPRIETES AND MATIONAINS SHALL BE LINEACH AND SHOOLWARDS MINISTES MANUFACE ON THE PRINCE DURINICAL, AND SHOUGHER OF MINISTES MANUFACE ON THE MINISTER AND CHIEF MITTERS OF THE STALL.

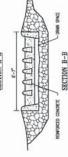
CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT) ®x_



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)

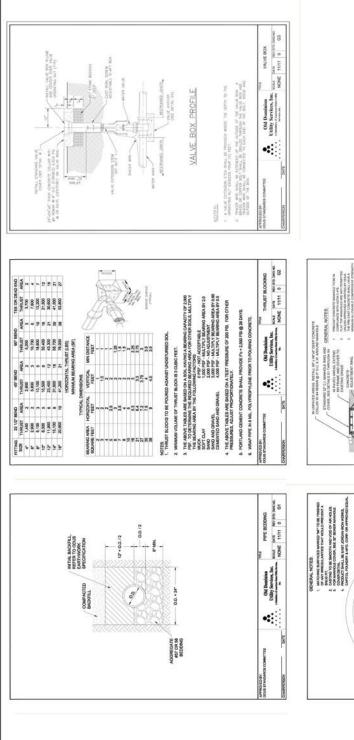








C5.01 EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

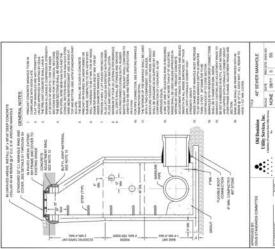


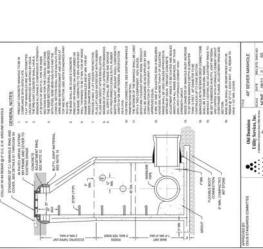
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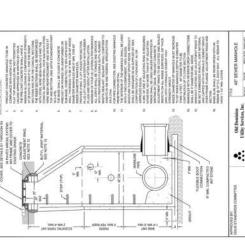
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THE ANCHOR BLOCK SHALL BE KEYED NO LESS THAN 12 INCHES INTO LIN TRENCH WALL AND NO LESS THAN 6 INCHES INTO THE TRENCH BOTTOM.

5. PCLYETHYLENE PLASTIC SHALL BE INSTALLED BETWEEN THE VALVE AND SHALL BE 6 ML. THOK 4. FOR DATE VALVES REQUIRING VALVE BOXES, SEE COUS DETAIL GS.









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FOR CONSTRUCTION

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OLD DOMINION UTILITY SERVICES	ALTERNATE WATER SUPPLY LINE	AND BOOSTER STATION

SCALE

PERRUARY 2013

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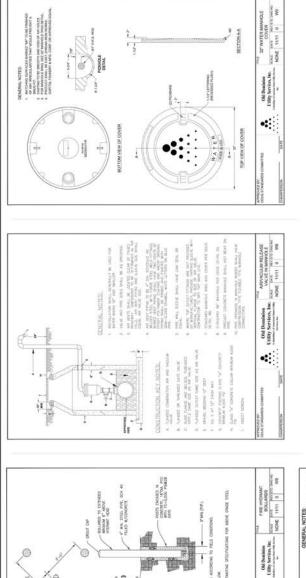
STANDARD DETAILS

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APPROVED BY: OCUS STANDARDS COMMITTEE

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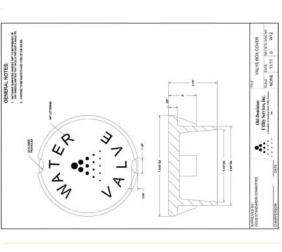
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NOTES

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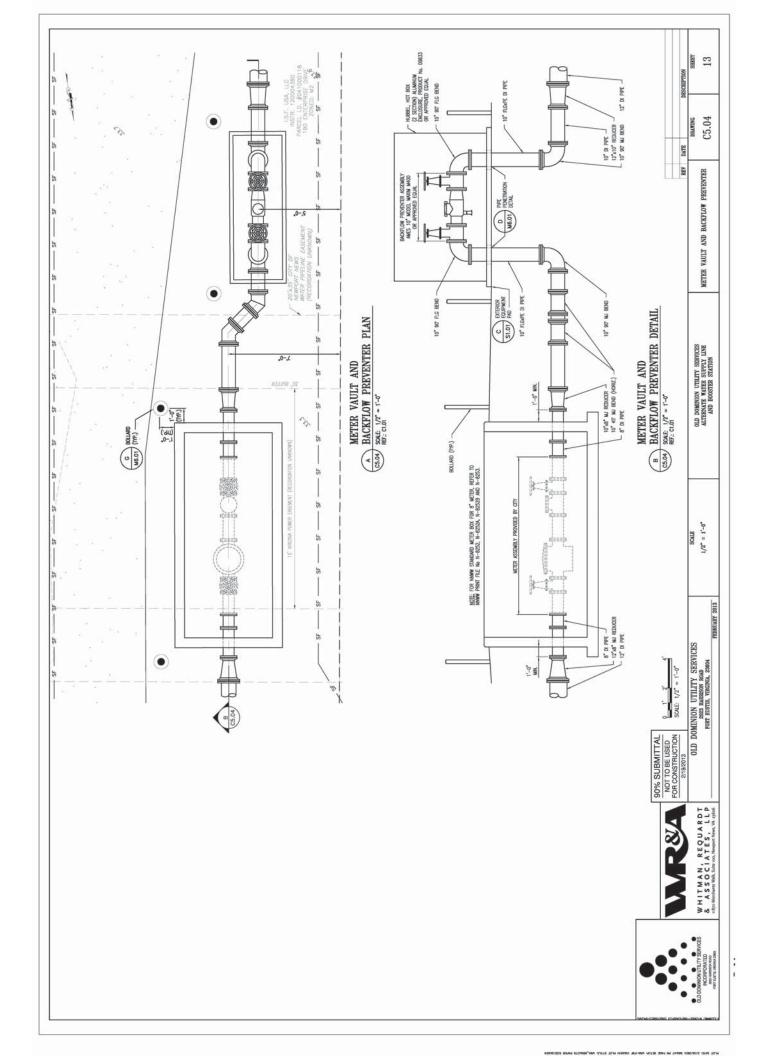
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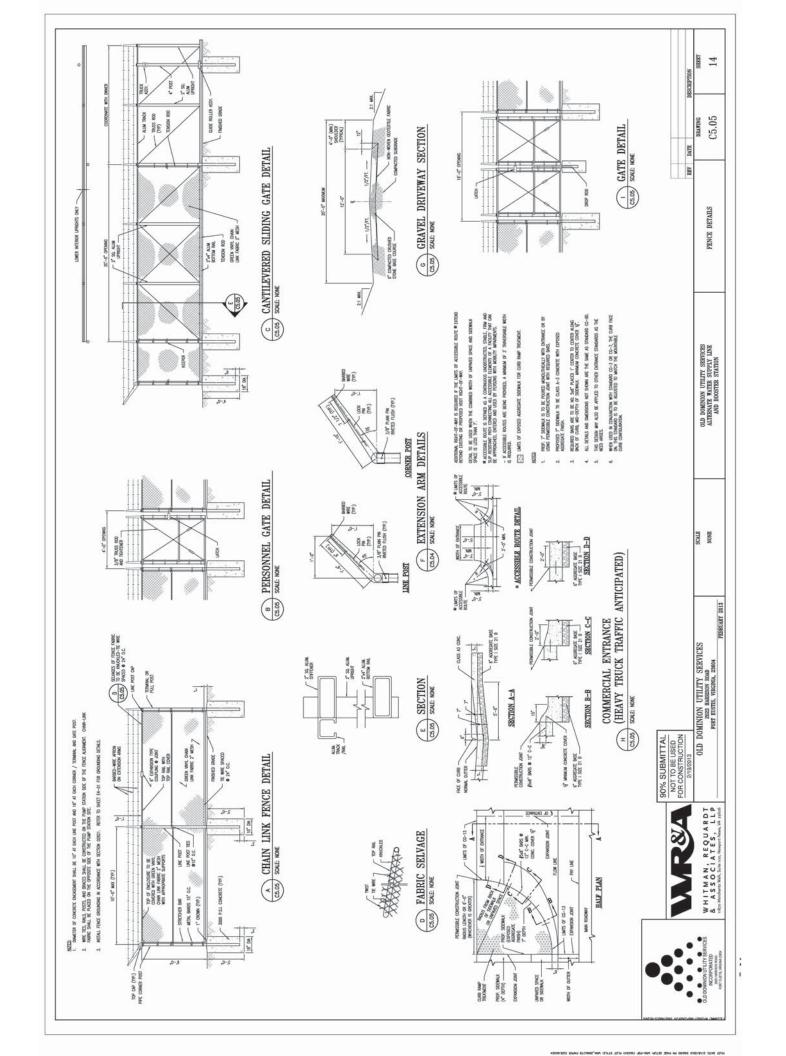
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

STANDARD DETAILS

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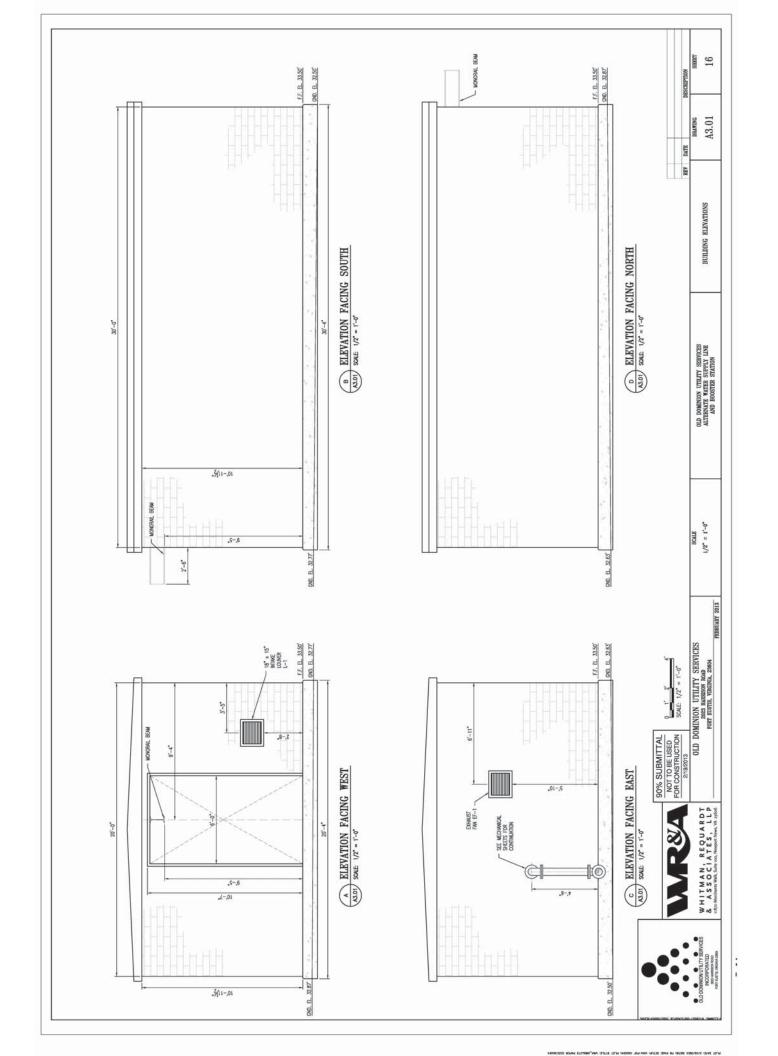




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STRUCTURAL NOTES

CODES AND STANDARDS:

CENERAL NOTES:

- THE SOES AND LOCATIONS OF EQUIPMENT PLOS AND PERSTALS, IS WITH AN EXCHANGE HER ACTUAL MOMENTER AND EXPONENT AND THE PROPOSITION OF THE ACTUAL EXCHANGE HER ACTUAL SIGN THAN DESCRIPE ACTUAL OF THE ACTUAL SIGN THAN DESCRIPE ACTUAL OF THE ACTUAL ACTUAL OF THE ACTUAL ACTUA
 - LOCATIONS OF BORINGS ARE SHOWN ON CIVIL DRAWNGS, BORING LOGS ARE INCLUDED IN SPECIFICATIONS.
 - COORDINATE ALL ACTIVITIES, INCLUDING THOSE OF SUBCONTRACTORS.

EDUNDATION NOTES:

- KEP ALL EXMANDES DRY, STANDAN, WITER MILL NOT BE ALLOWED IN CONSIDER STORM, A LARGE OF TO, MA WOPER BOARDER MAD A RT, LIVER OF CONSIDER STORE, LINES ON VENUE, ALL EXAMEL BE VENUE TO AND PROPRIED BY THE BLOKETH BEFORE PLUCKNE ANY CONCRETE OR COLORIDE STORE. DESIGN BEARING PRESSURE SHALL BE 3000 PSF.
- FOR MICHANICAL AND ELECTRICAL WORK TO BE INCORPORATED IN FOUNDATION WORK, SEE MECHANICAL AND ELECTRICAL DRAWINGS.
- FILL ALL DICCESS EXCAVATION BELOW THE ELEVATION OF THE CONCRETE AS SPECIFIED.

- PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AI 28 DAYS.
- DETAL AND CONSTRUCT REINFORCED CONCRETE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE".
- DETAL RENYDRONG STEEL IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE SP-66, "ACI DETALING MANUAL", WHICH INCLUDES ACI 315, "DETALS AND DETALING OF CONCRETE RENRODCEMENT".
 - PROVIDE REHPORCEMENT CONFORMING TO ASTALA 615, GRADE 60, DEFORMED BAPS.
- PROVIDE WELDED WIRE FABRIC CONFORMING TO ASTM A 185.
- UNLESS WOTED OTHERWISE ON THE DRAWNUS, THE CONCRETE COMER FOR RENFORCEMENT SHALL BE AS FOLLOWS:
- DOTTOM BARS IN FOOTINGS, AND NE SLAGS ON EXPRIH OR GRANEL. 3".
 SLAGS ENDISSED TO GROUND, WEATHER, PROCESS LOQUE ON WHOMES AFTER
 PERCONAL, OF FORMER. 2".
 WENTER OF THE STATEMENT OF THE STATEMENT, PROCESS LOQUE),
 WHORS OF HILLOK THATTE. 1".
 WHORS OF HILLOK THATTE. 1".
- SJEMIT RENTORCING STEEL DETALS (SHOP DRAWNGS) AND RECENE APPROVAL BEFORE PROCEEDING WITH FABRICATION.
- CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" LINLESS OTHERWISE NOTED.
- DETAIL ALL SPLUCES FOR REDIFORCING BARS NOT DIMENSIONED ON THE DRAWINGS AS TABULATED ON THIS DRAWING.
 - POUR CONCRETE SLABS AND WALLS BETWEEN INDICATED JOINTS, ALLOWING A MINIMUM ELAPSED PERIOD OF 3 DAYS BETWEEN ADJACENT POURS.
- PROVDE JONIS AS DETALED ON THE GRAWINGS, NO ADDITIONA, JONIS SHALL BE LEGS, NOS ANY OMITED, EXCEPT BY WRITTN ALTH-BRAZINON TROW THE DACHERS, APPROVED, ADDITIONAL, JONIS SHALL NOT RESULT IN ADDITIONAL, EXPENSE TO THE OMNER. WHERE A SLAB IS SLOPED (TOP AND/OR BOTTOM), PROVIDE SLOPED REINFORCING PARALLEL TO THE CONDRETE SURFACE.
- SUZE AND LOCATE ANCHOR BOLTS AND EQUIPMENT PADS OR PEDESTALS TO SUIT EQUIPMENT FURNISHED.
- REVEW ALL BRAINES FROM OTHER DISDIPLINES AND COORDINATE ALL OPENINGS AND EMBEDGED TEMS SUCH AS SLEDES, ANCHORS, CONDUIT, ETC., THAT WILL BE INCORPORATED INTO CONCISETE WORK.
- PROVIDE BONDING COMPOUND AT ALL LOCATIONS IN WHICH FRESH CONDRETE, COMES IN CONTACT WITH CURED CONCRETE.

- INTERNATIONAL BULDING CODE IBC (2009) INCLUDING THE MODIFICATIONS MADE BY LODEL JURISDICTION.
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "STEEL CONSTRUCTION MANUAL THREEDITH EDITION".
- AMERICAN CONCRETE INSTITUTE ACI--318 (08), "BULDING CODE REQUIREMENTS FOR RENTORCED CONCRETE".
- AMERICAN CONCRETE INSTITUTE ACI-350 (06), "ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES".
- AMERICAN CONCRETE INSTITUTE ACI-530, ASCE 5, TAS 402, (06) "BULLONG CODE REQUIREMENTS FOR MASONRY STRUCTURES". ALUMINUM ASSOCIATION "ALUMINUM DESIGN MANUAL" (2005).
- AMERICAN SOCIETY OF CIVIL ENGINEERS ASCE 7 (05), "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES."
 - AMERICAN ASSICIATION OF STATE HIGHMAY AND TRANSPORTATION OFFICIALS (MIGHT) "STAMBARD SPECIFICATIONS FOR HIGHMAY BRIDGES" (2009).

DESIGN TOWNS

- DGAD LOADS:
 A STRUCHESS ACTUAL WEIGHT
 B. WEIGHT OF SOIL 100 PCF FOR JESSTING LIPLIFT
 C. WEIGHT OF SOIL 120 PCF FOR JEAN LOAD
- LIVE LLONDS:
 A FLOOMS 159 PSF IN AREAS NOT GOOLPEED BY EQUIPMENT OR TRUCK LLONDON.
 B. SOUPHOST ACTUAL WEIGHT OF EQUIPMENT OR MINIUM 150 PSF,
- 12. SNOW LOAD:
 A GROUDO SNOW LOAD (Pg.) 15 PST.
 B. DYSOSAR FACIOR (Qs.) 1.0
 C. THERAM, KLING (Qs.) 1.0
 D. SNOW LOAD WICKNESS FACIOR (g. 1.1
 E. RECURED PR. (Qs.) (Qs.)
- 3, ROOF LIVE LOND 20 PSF.
- 4. WIND LOND.

 B. EXPOSURE CATEGORY: C
 C. INTERN PRESSURE CYCLECKT +/- 0.55
 0. WIND LOND APPOSTANCE PACTOR (1): 1.15
 E. BULLING DOCUPANCY FACTOR (1): 1.15
 E. BULLING DOCUPANCY FACTOR (1): 1.15
- A BLUNK COOPANY CUREDON: III SENDER ACCELERATOR AT SHORT BURNANCE SELFINE RESTORES ACCELERATOR AT SHORT BURNANCE SELFINE RESTORES ACCELERATION AT ONE SECTION FROM SELFOND FROM SELFOND FROM SELFOND SELFOND FROM SELFOND SELFOND SELFOND FROM SELFOND SELFOND SERVEN SERVEN
- FOR FLOTATION CALCULATIONS, GROUND WATER TABLE ELEVATION IS ASSUMED AT THE ELEVATION OF THE FINISHED GRODE

qq. STD 180" HOOK MINIMUM TENSION EMBEDMENTS 12db STD 90" HOOK 14, 16 17* *****00 ď 11 12. 16, 10 as 12, 18 : 'n 107 , je 12, je -19 .98 25. PARS TO BEAM 82, 26. .99 70" .98 79" 103" 5 28 29 29 2/5 SLAB AND WALL 44. × BAR SIZE ENGLISH Ę 10

JAP SPLICE ASSUMPTIONS

- CONCRETE: 4500 PSI COMPRESSIVE STRENGTH (NORMALMEIGHT CONCRETE) SLAB AND WALL:
- 6" WINNUM FEBAR SPACHO WITH CONCRETE CORR = 1.5" CLIAR WINNUM CLEAR SPACHO BETWEEN BARS = 1.5 & (1.5" MN), MINIMUM CONCRETE COARR = 1.5" CLEAR. MINIMUM STRRILP 14017" PROVIDED. BEAN:
- TOP BAR FOR SLAB AND BEAM SWALL BE DEFINED AS REINFORCEMENT SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST BELLOW THE SPLUCE. TOP BAR

MOLDER SECTION

- CRITICAL SECTION



STANDARD 180° AND 90° END HOOKS

TENSION LAP SPLICE AND STANDARD HOOK LENGTH (ACI 318-08/ACI 350-06)



WHITMAN, REQUARDT & ASSOCIATES, LLP 1850 Metchants Walf, Solet 100, Newport News, VA aybob **√**83√

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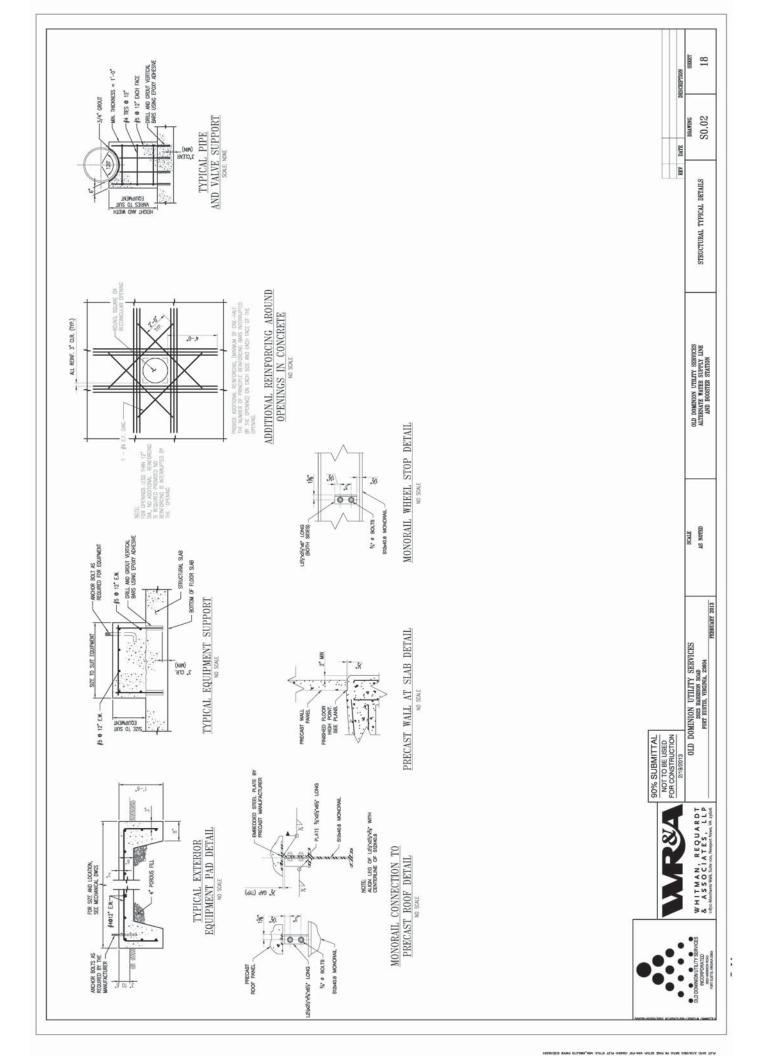
PERRUARY 2013 OLD DOMINION UTILITY SERVICES 2002 HARBSON BOAD FORT EUSTS, VIRGINIA, 23604

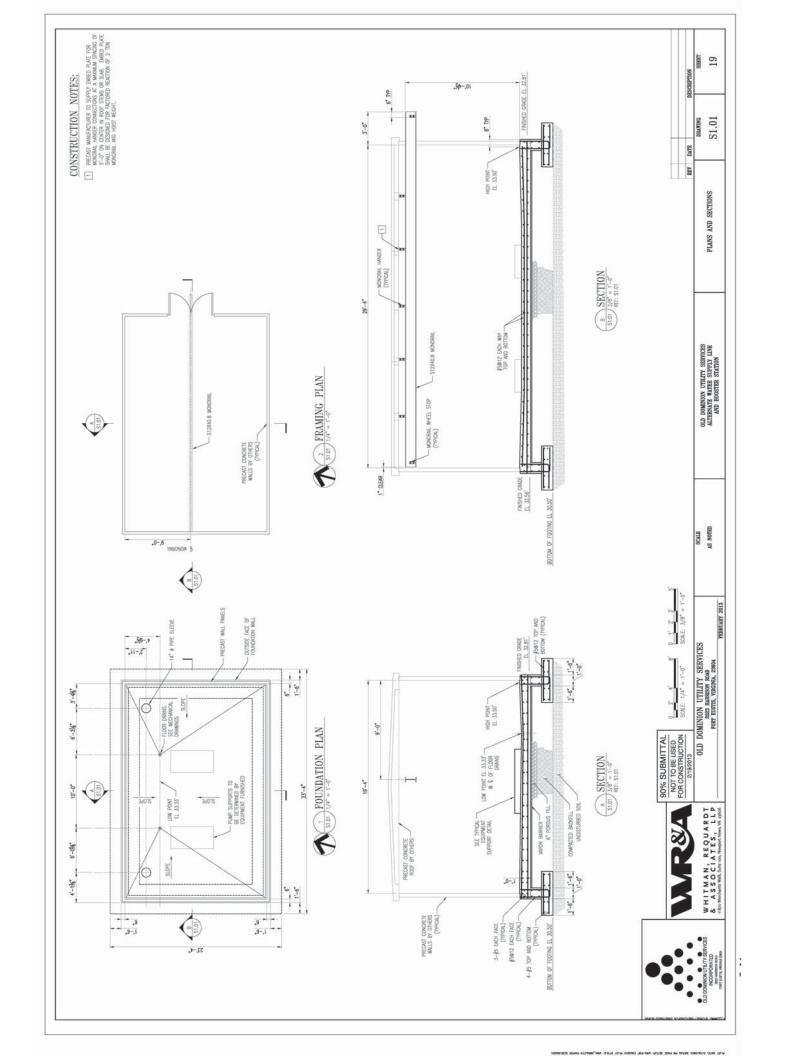
SCALE NONE

OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

REV STRUCTURAL NOTES

S0.01 DRAWING DATE





1,800 RPM 77.5 FEET 58.0 FEET 1,575 GPM 74.5 10 FEET 40 HP 10 FEET 40 HP 10 FEET 14 INCHES 10 INCHES 8 INCHES DESIGN POINT 1575 GPM @ 58.0 FT SUPPLIBETURE POINT TOTAL HEAD. SUPPLIBETURE POINT TOTAL HEAD. SUPPLIBETURE POINT HEAD ARTHER. SUPPLIBETURE POINT HEAD. MANUAL BROSS COLD SITE (MR. DMETER). SUCTION DAMETER. DOSHWARD DAMETER. SYSTEM CURNE CITY TANK FULL AND BASE TANK EMPTY NON-CLOG CENTRIFUGAL PUMP DESIGN CRITERIA: 1400 SYSTEM CURNE CITY TANK EMPTY BASE TWAK FULL PRIMARY PUMP SYSTEM CHARACTERISTICS SUPPLEMENTARY POINT 1200 MAXIMUM PUMP OPERATING SPEED: MINNAM SHATI-OFF HEAD. DESCH POMT TOTAL HEAD. DESCH POMT MINNAM BRITE. DESCH POMT MINNAM BFFDERYCT DESCH POMT MINNAM BRITE. 901 FLOW (GPM) MINIMAN SHIT OFF HEAD 77.5 FT TOTAL DYNAMIC HEAD (FT)

PRESSURE GAUGE
PRESSURE SENSOR
POUNDS PER SQUARE INCH
POUVAINACHLORDE

OALLONS GALWAZED GALLONS PER DAY GALLONS PER MNUTE HUMDY PER

ABOVE FINISHED FLOOR ABOVE GRADE

NON RISING STEAM NOT TO SCALE

NOT IN CONTRACT NORMALTY OPEN NUMBER

FLOOR FEET PER WINUTE FAN REVOLUTIONS PER WINUTE

MECHANICAL EDIPLADIT INMERSONS, LOCATIONS, AND FIPMS SYSTEM LIYOUTS ARE BESTON IN FROMWELD IN THE CONTROL OF TH

NOT ALL AND ONLY CERTAIN THES OF SUPPORTS ARE SHOWN ON THE MECHANICAL ROWNESS, MLL PHE AND DUCT SUPPORTS SHAUL BE DESCRIED AND NETALLED BY THE CONTRACTOR AS SPECIFIED AND INTERFACE OF THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGNEER.

THERMOSTAT SHALL BE MOUNTED 60" AFF. UNLESS OTHERWISE NOTED.

só.

MECHANICAL ABBREVIATIONS:

MAKE PROPER CONNECTIONS TO FIXTURES AND EQUIPMENT. DRAWINGS ARE SCHEMATIC AND ALL BRANCHES, FITTINGS AND CONNECTIONS MAY NOT BE SHOWN.

MECHANICAL GENERAL NOTES:

COORDIANTE LICKTION OF PIPING WITH LIGHTING FIXTURES, OTHER PIPING, EQUIPMENT AND BULLONG STRUCTURE. PIPING SHALL BE RUN TO ANDID CONFLICTS WITH OTHER TRADES.

EVOLUTIONS PER MINUTE

HIGH DENSITY POLYETHMENE HORSEPOWER HUMDISTAT

FEET PER MINUTE

DAMPER DESIGNATOR

DEGREE FAHRENHEIT DUCTLE RON

DUMETER DUCTLE RON PIPE

FLOW PREVENTER

AR RELEF VALVE BACKDRAFT DAMPER

ENTIFICATION

MECHANICAL LEGEND:

FLANCE, FLANCED

MOTOR OPERATED DAMPER

PIPE DOWN

PIPE UP

9

MANABLE FREQUENCY DRIVE. FOIT THROUGH ROOF UNIT HEATER UNLESS OTHERWISE NOTED

MECHANICAL JOINT MISCELLANEOUS MOTOR OPERATED DAMPER

EXHALST FAN DESIGNATOR
EXHALST FAN
EFFICIENCY
ELEMINON

EXISTING ELECTRIC UNIT HEATER EXMALST

DUNTED WUAL AIR VENT ORMALY CLOSED

MTER CAUCE

TOTAL DYNAMIC HEAD TEMPERATURE TOP OF DUCT

JNEAR FEET ONG RADIUS AXXIMUM WULFACTURER

STAINESS STEEL

BALL WLVE

FLANGED CONNECTION BACKDRAFT DAMPER CHECK VALVE

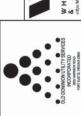
FLEXIBLE CONNECTION

FLOAT SWITCH GATE VALVE

MECHANICAL JOINT CONNECTION GATE VALVE IN RISE HUMIDISTAT

PRESSURE SENSOR PRESSURE CAUGE THERMOSTAT REDUCER NOINO 98840 ₩ ♣

UNIT HEATER



W HITMAN, REQUARDT & ASSOCIATES, LLP 1870 Merchants Walk, Sales 100, Newport News, VA 19506 **√**⊗?

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PERRUARY 2013 OLD DOMINION UTILITY SERVICES 2023 BARRISON ROAD FORT EUSTIS, VIRGINIA, 23604

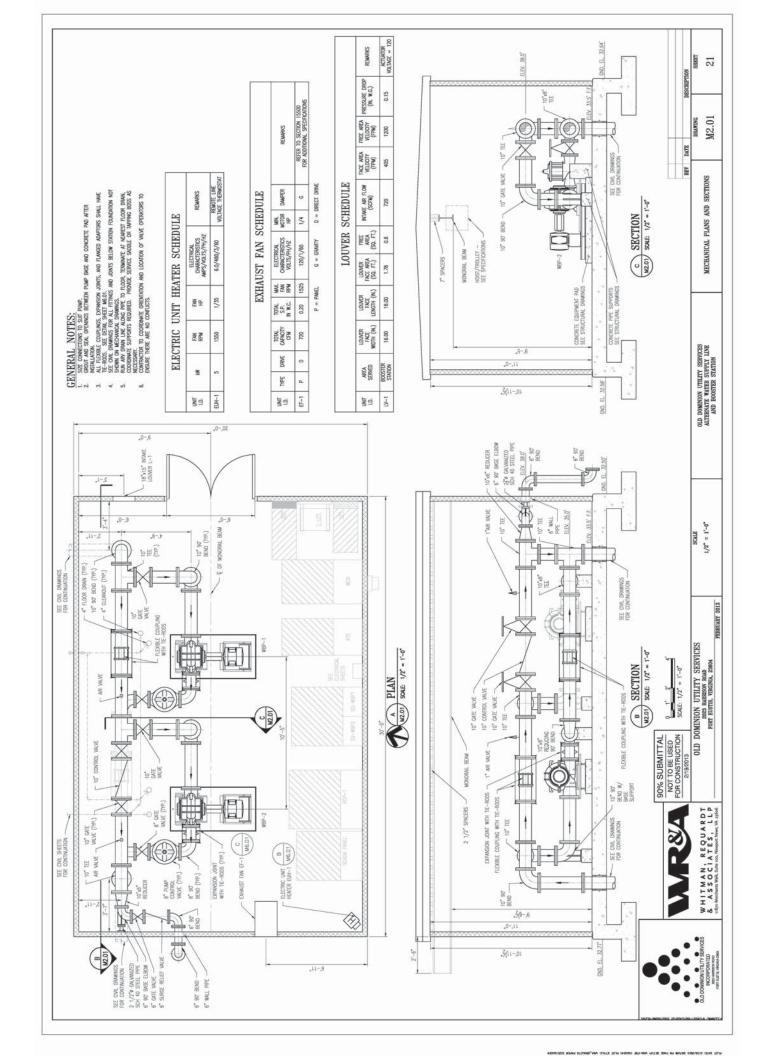
SCALE

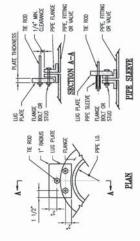
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

MECHANICAL NOTES, LEGENDS AND PUMP DESIGN CRITERIA

M0.01 DRAWING DATE

REV





NOTE: F PAIR IS REQUED TO BE MOUNTED ON ROFOSES SEE OF FLANZE, PROVIDE A PPER SIZENE AND WASHERN ON THE DON OF THE TREAD SO THIS MEMORIAL DISJOINA BIT HIS SIZENE AND THE FLANZE CAN BE WANNIARD. FLANZE SHENCE, NR CONTING-MITH LIGH PAIR SHALL BE GROON SHOOTH TO CLASH THE CASHON REPESTABLY AND BEARCESS DIFFIEND. CONTING SHENCE OF LUE PAIR SHALL BE MICHINED TO A ONE BEGINSTEE THERS FOR PIPE DAMETERS 12-MICH AND LARGER.

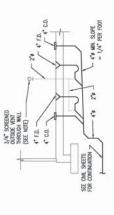
EF

DETAL IS THEICH, FOR BOTH BIDS. THE USE OF A FLANCE STOP OR SAMLAR COAPONENT SYML, NOT BE USED UNLESS NOTED OTHERWISE, THIS STO PRECENT THE FPE, HTITING WATER OR WAVE, THAT IS BEING PRESTRANCED TO BE TOTALLY REMOVED.

REMOVED.			PPE	
THAT IS BEING RESTRANED TO BE TOTALLY	ROD MATERIAL - ASTM A193, Grade B7	PLATE MATERIAL - ASTM A36	SLEDYE MATERIAL - SCHEDULE 40 STEEL	
벌				

PRESSURE PSI	150	150	150	150	150	
PIPE SLEEVE (F REQUIRED)	3/4"	3/4"	3/4"	3/4"	3/4"	
PLATE THICKNESS	1/5.	2/8	3/4"	3/4"	3/4"	
DIAMETER OF RODS	3/4"	3/4"	3/4"	3/4°	3/4"	
NUMBER OF RODS	2	2	2	2	2	
PIPE	٠,	10	*00	10.	12"	

A TIE ROD DETAIL MG.01 SOME NONE



FLOOR DRAIN SCHEMATIC

NOTE: VENTS SHALL PENETRATE WALL 6" BELOW CELLING. SEAL WALL PENETRATIONS. COORDINATE PENETRATIONS WITH BUILDING MANUFACTURER.









SCALK

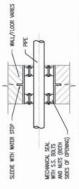
ANUFATURER'S RECOMMENDATIONS	DMENSION TO SUIT
Printed months and time of the load	BACKDRATT DAMPER CLEARA
COLUMN OR WALL THE SUFFORT BRAINER. CONTINUE SYNLL PROVIDE ADDITIONAL SUIPPORT CHANNELS RODS AND S.S.	3 6x6x1/8"-#ELDED STEEL AN
HAREWARE TO SUIT CELING INSTALLATION.	Towns to out (* outs)
1 2	MOUNT FAN TO PLATE
TYPICAL UNT HEATER	USING 1/4" S.S. BOLTS -
out one of social is control and	ALL FANS SHALL BE
UTILIZING SHELF OR BRACKET SUPPORTS	FAN CLARD UNESS FAN IS
SWILL REQUIRE THRU-BOLTS WITH	INSIDE OF A PLENUM
3/8-Inch Thick bearing Plates Spannic Horzonial, Bolt Centers Or Worth Filled Cau Cells.	1/8" STEEL PLATE
CUNINGLIOR TO CUCHUNALE.	
S SHALL BE MOUNTED A MINIMUM E FINISHED FLOOR UNLESS	

CLEARANCES SHALL BE IN A WITH MANUFATURER'S RECON

CELLING AND WALL

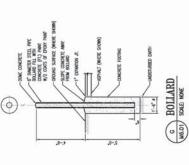
PIPE FLANCE

B TYPICAL UNIT HEATER DETAIL



NOTE: FOR FLOOR APPLICATIONS, SLEVE SHOULD EXTEND A MINIMUM OF 2" ABOVE FINISHED FLOOR ELEVATION.

DETAIL SOME NOWE



W/BIRD-SCREEN WREES WOOD STUD FRAMING W/INSULATION CONCRETE PANEL Y (MP.) +

TOR ANCIONEGE TEST, HIGH JACKSFE MOSTER CHARLES CONFERCING SAUL COORDINATE MOSTER PRESENCENT IN FROMEWOR WITH FREEDINGTH WAS CONFERCE PARK. IN STATE RECOMMENTED BEREINED MOSTER WAS INCLUDED SHALL BE SUPPLIANT AND AND AND THE STATE AND AND THE STATE AND AND THE STATE A

HVAC DETAIL NOTES:

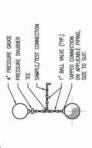
ANCHORS SHALL BE SPACED ACCORDING TO MANJEACTURER'S RECOMMENDED SPACING FOR INSTALLATION IN PRECAST PANELS.

2

ALL DAMPERS SHALL MATCH IN NOMINAL SAZE WITH THEIR RESPECTATE LOUNERS UNLESS OTHERWISE INDICATED ON THE CONTRACT DRAWINGS. FRAME AND PLATE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

n 4

C TYPICAL EXHAUST FAN DETAIL



SUCTION PRESSURE GAUGE 0-200 PSIG DISCHARGE PRESSURE GAUGE 0-300 PSIG

PRESSURE GAUGE WITH

E PRESSURE SNUBBER DETAIL

MEO.) SWIE HOME

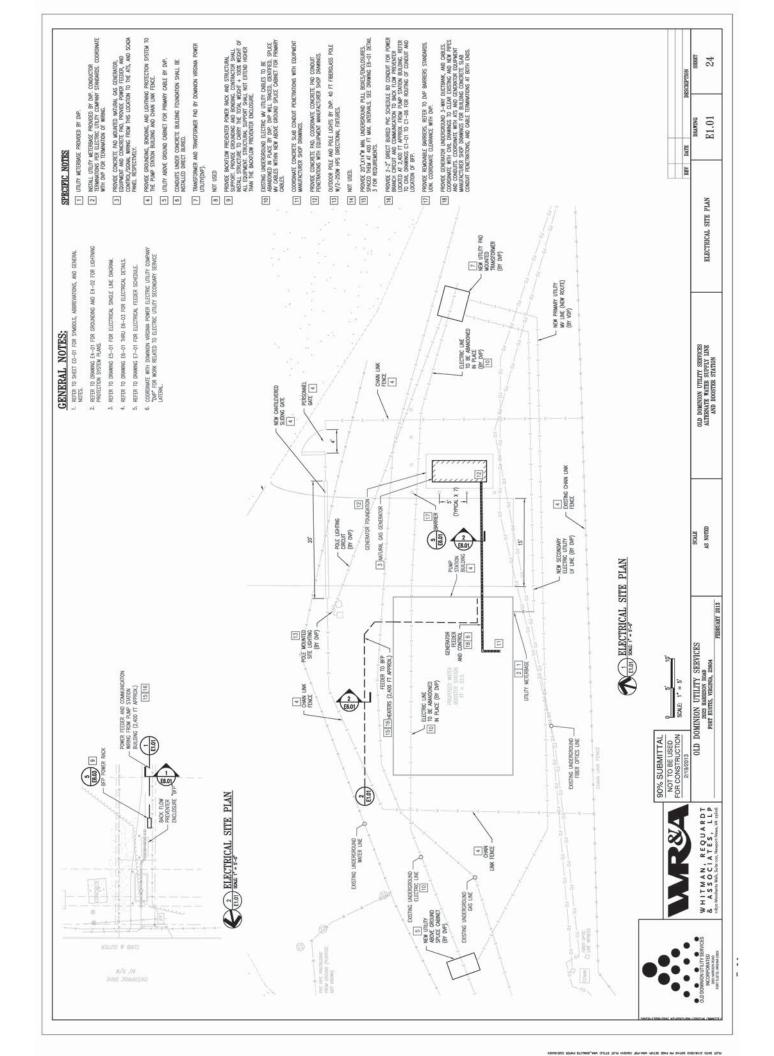


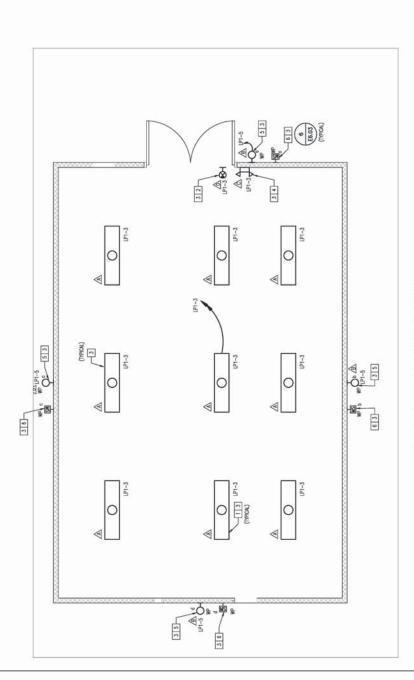
M6.01 DRAWING

MECHANICAL DETAILS

OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

																														DESCRIPTION	23
ABBREVIATIONS	NTERRUPTING CAPACITY ATING CURRENT	ABOVE FINISHED FLOOR AMPERES AUTOMATIC TRANSFER SMITCH	AN WIRE LAGE FINSHED GRADE OW PREVENTER	R PUMP	DOSTER PUMP	COMMUNICATIONS COMPUT ONLY CONTROL PAMEL CONTROL PAMEL	CURRENT TRANSFORMER DIRECT BURIED	DISCONNECT SWITCH DISTRIBUTION POWER PANEL DOMINION VIRGINIA POWER	DRAMING EMERGENCY EMPTY CONDUIT EDMANT FAN	IC FECTRICAL IC UNIT HEATER	FLECTING UNT HACKER CORRESION PROOF FUEL DAY TANK SSTEM. FUEL LEVEL SYSTEM CONTROL PANEL. FULL VOLVAGE, NON REVERSING GROUND BUS.	GROUND FAULT INTERRUPTER GROUND GALVANIZED RIGID STEEL CONDUIT	VIENSITY DISCHARGE LTG PET ALITO SELECTOR SWITCH	HORSE POWER HIGH PRESSURE SODIUM INSULATED CASE JUNCTION BOX	ALLO AMPLIAES ALLO AMP INTERRUPTION CAPACITY HOUSAND CIRCULAR MILS	OLOVOLI COLONIA MAPERES OLOMATT HOUR	DIDIGHT FLEXIBLE METAL CONDUIT TING PANEL	GHTING PROTECTION SYSTEM GHTING AND IN	NN CRECUIT BREAKER DTOR COMTROL CENTER NN DISTRIBUTION SWITCHBOARD	an ground bar Ounting height Fire, Halde	OPERATED DAMPER SENSOR	NORMALLY CLOSED NATIONAL ELECTRIC MANUFACTURER ASSOCIATION NATIONAL FIRE PROTECTION ASSOCIATION	CONTRACT LLY OPEN, NUMBERS SCALE	POLE PUSHBUTTON STATION PUMP CONTROL PANEL	MONITOR S PER SQUARE INCH	POTENTIAL TRANSFORMER POLYNYNIL CHLORDE RIGHT OF WAY	NG CONTACTOR THORECTION DEVICE STATE STARTER	SWITCH SYMMERICAL TRANSCORMER TRANSCORMER TRANSCORMER TRANSCORMERISE NOTED	WATT AMPS WAT SOURCE PLUP WAT SOURCE	REV DATE	NOTES, E0.01
ABBRI									DWG DRAWIN EC EMERG EMENTY EF		EUHC ELECTR FDDS FUEL PELL I FLSCP FUEL I FVAR FULL A			HOS HIGH PROPERTY OF THE PROPE		KVA KUDVO KWA KUDVO KWA KUDVO KWH KUDWA	8000	1553	MCB MAIN C MCC MOTOR MDS MAIN D	232		NC NORMA NEMD NATION NFPA NATION		. 3		PVC POLYM RMS ROOT 1 ROW RIGHT			W WATER WE WATER WE WATER WE WATER XFAR TRANSA	9	ELECTRICAL GENERAL NOTES, SYMBOLS & ABBREVIATIONS
GENERAL NOTES	INSTALLATION OF ALL WIRING AND CONDUITS SHALL CONFORM WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (WPPA 70 AND LOCAL CODES).	CONDUIT RUNS ARE SHOWN DAGRAMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREPENT CONDUISTS WITH EQUIPMENT AND STRUCTURAL CONDUISONS.	PROMPE ALE GOURGED THE BOXES AND JUNCTION BOXES FOR INSTILLATION OF THE WIGHER IN ACCORDANCE WITH THE CONTROL TEXTURE THROUGH	NOT BE INDICATED ON THE DRAWINGS.	FINAL COATRONS FOR ALL ELECTROCAL ELOUPENT, INCLUDING EXCEPTALLS. LUNCTINN BOXES FOR SPECIFED FOURTHY, LIGHTING FAYLINES, SMITCHES, ETC., SHALL BE APPROVED BY THE COLUMY PRIOR TO INSTALLATION.	THE WIRNG DAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS ARE BASED THOUGH SELECTED STANDARD GOLDWORTST OF BESTIGNLY. MODIFICAL STOKES THE CONTROL OF THE C	EXPENSE TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. PROVIDE ALL NECESSARY COMPONENTS REDURED FOR MAKING FINAL CONNECTION	OF ALL EQUIPMENT IN THIS CONTRACT. ALL ALARM INDICATION AND CONTROL WIRING IN JUNCTION BOXES SHALL BE WIRED	10 NUMEROD I DRAING, SINDS AND INCHINED AS 10 SIGN WAD END OF KUN. ALL ELECTRICAL EQUIPMENT RISTALED AGAINST CONCRETE OR MASCHEY WILLS SHALL BE INSTALLED WITH A 1/4" SPACE BETHERST THE EDUIPMENT AND	THE MOUNTED SUPPLYED SPACES SPACE SO STATE OF STATES STATE, PYC. UR STILLIN. ELECTROLAE ENCLOSINES LOCATED OUTDOORS AND NIDODOS N. WELL SPACE AND PLOCATION STATES. THE SWEATHEDGENOSE METAL AT JUNESS CITEMPRISE MOTED.	DRAWINS ARE DAGRAMMATIC, ACTUAL LOCATION OF EQUIPMENT TO BE DETERANED IN THE RED. NEW BOUNDERN SHALL FIT MITO ANALABLE SPACE. IT STATE RESPONDED THE PROPOSE EQUIPMENT WHICH MEETS THE SPACE SOURCE THE OFFICE AND ANALABLE SPACE.	PERSHED AT NO ADDITIONAL COST TO THE OWNER. PROVIDE	CONGRIME, WAR SHELDLE MIN THE COUNTY, WORK WILL BE LIGHED IN WORK SHALLEY SECURITY RECULATIONS AT THE FACILITY. WORK SHALL ALLOW FOR DALLY DEFEATION OF THE FACILITY WITHOUT INTERNIPTION.	SUBMIT A LIST OF ALL MAJOR EQUIPALITY AND PRTINESS TO THE ENGMESTS FOR REVEW AND APPROVAL NO SUBSTILLINDIONS WILL BE ALLONED WITHOUT THE PERMISSION OF THE ENGMENT IN METHOR ALL DETOMORPHIES THE WARN AND EACH THE MANUFACTURERS.	NAME ALL EQUIPMENT SHALL BE UL LISTED.	THE ARRICHMENT OF THE CONDITION OF THE ARROWS THE ARRICHMENT OF TH	IN PARELBOARD. N. PARELBOARD. FOR MECHANICAL EQUIPMENT ARE BASED ON EQUIPMENT SERVED ON EQUIPMENT SERVED ON EQUIPMENT. SERVEDER. FOR STATE OF THE PRINT OF THE PAREL STATE OF THE BASED ON EQUIPMENT. FOR STATE OF THE PAREL STATE OF THE PAREL STATE OF THE BASED ON EQUIPMENT. FOR STATE OF THE PAREL STATE STATE OF THE PAREL STATE STATE OF THE PAREL STATE STATE STATE STATE OF THE PAREL STATE STAT	WANTE DAZI RECORDINATION IN RECOVERING STORY EXPERIENCES ON THE COMMISSION OF THE CO	LICK SIDE OF DOORS 4"-O" AFT, UNLESS OTHERWISE NOTED. CONTRACTOR STANDARD SUPPLY UNDER TRACES, THE CONTRACTOR SUBJECT STANDARD SUPPLY DEVOLUTION TO SUPPLY MATTERIES.	ÉTC. ARE PROMIÈD AND SUPERNISE THE WORK OF THE OTHER TRADES FOR QUALITY. AND CODE COMPLIANCE.	VISIT THE JOB SITE AND EXAMINE THE EXISTING CONDITIONS THAT MAY AFFECT HIS WORK. OPENINGS AND PASSAGE OF CONDUITS OR WIREMAYS THROUGH FLOOR SLABS AND FREE	PARTITIONS SHALL BE PROVIDED WITH ULL LISTED FIRE RATED SLEEDING	ALL JUNGTICH AND POLL BOXES STALL BE LIBERED MITH THER VOLINGE AND USAGE. CUT AND PATCH SLABS, CELLUG, ROOF, FLORR, MALE TAKENDAY AND OTHER SURFACES AND SECREDAY TO ACCOUNT BY CONSTRUCTION, MICH. MINES THE CONTRIBET	AS RECESSAR TO ACOMPLISH UNSHROUND WORN UNDER HIS CONTRACTOR SALL CORRECTOR. TO SECRETARY SERVE STAND POWER AND OBJAIN APPROVAL OF ALL WORK RELATED.	ANICL FROM FOREN COMPANY.	24. SERES RATING OF CIRCUIT BREAKERS SWALL NOT BE ALLONED.	ALL MAJOR EQUIPMENT SHALL HAVE A 4" HIGH HOUSE KEEPING PUD EXENDING A MINIMULA OF "BETOND THE EQUIPMENT ON ALL SIDES, UDN				OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND DATES STATION
	1. INSTALLATION OF A EDITION OF THE N	6	ri		4. FINAL LOCATIONS F JUNCTION BOXES F ETC. SHALL BE AP	5. THE WIRING DIAGRA UPON SELECTED S TIONS APPROVED E	EXPENSE TO ACCO		oć	9. ELECTRICAL ENCLO	10. DRAWINGS ARE DIA IN THE FIELD, NEW RESPONSIBILITY OF SPACE REQUIREMENT		TI. COOMINALE WORK CERTAIN AREAS AN WORK SHALL ALLO	12. SUBMIT A LIST OF AND APPROVAL, NC ENGINEER IN WRITH		THE CROUT NUMB	IN PANELBOARD. 15. ELECTRICAL REQUIS	PROR TO ORDERN	17. WHERE ELECTRICAL		18. WSIT THE JOB SITE 19. OPENINGS AND PA		21. CUT AND PATCH S AS ANTOGOSARY TO	22. CONTRACTOR SHALL	23. NOT USED	24. SERES RATING OF				11.51.500	AS NOTED
WIRING DIAGRAMS)	MISCELLANEOUS	1	XZ - DRAWING WHERE PLAN IS LOCATED SEE SHEET G1-02 FOR ADDITIONAL INFORMATION	KEYED NOTE		SCHEMATIC SYMBOLS		MOLDED CASE CIRCUIT BREAKER, TRIP VALUE INDICATED BELOW LINE AND FRAME SIZE ABOVE. 3 POLES UNLESS OTHERWISE NOTED.	CURRENT TRANSFORMER, RATIO AS INDICATED, NO. ADJACENT INDICATES NUMBER OF CITS.	TRANSFORMER	FUSE WITH PATING POWER MONTOR	3 PHASE, 3 WIRE, DELTA	3 PHASE, 4 WIRE, GROUNDED WYE	GROUND CONNECTION SURGE PROTECTION DEVICE	MOTOR	GENERATOR	FEDER DESIGNATION		SOUD STATE STARTER	ATS - AUTOMATIC TRANSFER SWITCH WITH ISOLATION BIPPASS	MANIMI LATITUD CRADITED CURTAL LUTTL PACEDI CARA	MANUAL MUIUK SINKIEK SMICH MIIH UNEKLUNU. PRONIDE HOA AS REQUIRED,									OLD DOMINION UTILITY SERVICES 2023 BARBISON BOAD PORT EUSTIS, VIRGINIA, 23604
AND	×	(x	(x)	⊡			2003	C	3 100.5	-}£-	\$0 G	Δ	۲"	→ <u>@</u>	•	• ⊖ (Э	ı	8	5	ľ	Ŋ.							90% SUBMITTAL NOT TO BE USED	FOR CONSTRUCTION 2/19/2013	OLD DOMI
ELECTRICAL LEGEND (SCHEMATICS	PLANS SYMBOLS	SWITCHES SINGLE POLE SWITCH	THREE WAY SWITCH, 20A, 120-277V.	LIGHTS LIGHTS	1" x 4" FLUORESCENT CELLING MOUNTED LIGHTING FIXTURE, NUMBER ALANCENT TO LIGHT DENOTES RESPECTIVE CIRCUIT NUMBER ALANCHOLI MIS SWITCH	WALL MOUNTED WETAL HALIDE LICHTING FIXTURE, NUMBER, ADJACENT TO LICHT DENOTES RESPECTIVE CIRCUIT NUMBER,	G=CONTROLLING SMITCH WALL MOUNTED OUTDOOR MOTION SENSOR,	0=CONTROLLING SMITCH INSUME SYMBE TYPE SEE INSUME SYMBE CHARNIE	SHEET E7-01. BARRENCY BATTERY POWERED LIGHTING UNIT	EXIT SIGN WITH BATTERY POWERED LIGHTING LINIT	RECEPTACLES DUPLEX RECEPTACLE (1704, 204), SUBSCRIPT "C" INDICATES GFI TPE, MOUNT 24" AFF UON, "MP" INDICATES WEATHERPHOOF	EQUIPMENT CONNECTIONS JUNCTION BOX	DRY TYPE TRANSFORMER, SIZE AS INDICATED. RECTRICAL LINIT HEATER	הפעטחוונה בחבנה חטח בונבני בוופטפונג חומס אבכ	AMPACITY AND NO. OF POLES, 39–304 UON.	DOCOMECT SWITCH. 1 - NEW STAFTER SIZE. NEWS SIZE 1 U.ON. 30/3- NOICATES DISCONNECT SWITCH SIZE AND POLES 30/3- NOICATES DISCONNECT SWITCH SIZE AND POLES.	GROUNDING	3/4" DAMETER x 10" LONG GROUND ROD	AR TERMINAL	Thirt house	UNDERGROUND SITE WORK	UNDERGROUND DUCTBANK	RACEMAY BELOW SLAB OR IN SLAB OR CONCEALED	RACEMAY EXPOSED RACEMAY TIBNED LIP OR TOMARDS MEWER	RACEMAY TURNED DOWN OR AWAY FROM VIEWER	BRANCH CIRCUIT HOUE RUN TO PANELBOARD, LP1 DENOTES TO PANEL LP1 AND NUMERALS DESMITY CIRCUIT NUMBERS, #12 ANG CONDUCTORS U.O.M.	NO, OF CANDICTORS AS REQUIRED, PROVIDE GROUND WIRE IN ALL CONDUITS	PANELBOARD ELECTRICAL PANELBOARD (208/1204, 34, 4W) ELECTRICAL PANELBOARD (4804, 34, 3W)			ENICES WHITMAN, REQUARDT & ASSOCIATES, LLP
		s.	S° W	r	∘∎	Θ̈	G	ů <	∮ ⊅	€Н	P	9	日色	, 1	r s i d	r Šī		© @	ố⊗						1	IP1-1,3,5		W			OLD DOMINION UTILITY SEI INCORPORATED 2023-AMERICA ISOCI





2) PROVIDE WILL WOUNTED SINGLE FACE LED EDIT SIGN.

3) COORDINATE EXACT LOCATION PRIOR TO INSTRLLATION OF LIGHTING.

FINTURES. (4) PROVIDE TWO HEAD EMERGENCY LIGHT FIXTURES WITH SELF PACK BATTERY BACKUP.

T PROVIDE 1" X 4" CELLING MOUNTED LIGHTING FIXTURE.

SPECIFIC NOTES

REFER TO DRAWING ED-01 FOR GENERAL NOTES, SYMBOLS AND ABBREWATIONS.

DRAWING NOTES

2. REFER TO DRAWING E3-01 FOR ELECTRICAL POWER PLAN.

4. REFER TO DRAWING ES-01 FOR ONE LINE AND RISER DIAGRAMS. 3. REFER TO DRAWING E4-01 FOR ELECTRICAL GROUNDING PLAN.

5. REFER TO DRAWINGS E6-01 THRU E6-03 FOR ELECTRICAL DETAILS.

6. REFER TO DRAWING E7-01 FOR ELECTRICAL LIGHTING FIXTURE AND PANELBOARD SCHEDULES. CONNECT BJERGENCY BANTERY PACK AND EXIT LIGHTS TO NORMAL LUSHING GRICHT WERD OF SMITCH, CONNECT TO NEAREST MORMAL GRICHIT, PROVIDE 28/12, 18/126-3/4* CONDUIT AND JAME FINL, CONNECTION. | B PROMIE CUIDONS MOTION SENSINS TO COMING, CUIDOOR WITHIN FROMESS PROMIE BRINGS AS ECOLOMBISCED BY WARRICH RICH WORNER STATE AND STATE OF A CONTINUE STATE OF TOTAL WITHIN STATE OF TOTAL STATE

S PROVIDE WALL MOLUNTED LIGHT FXCTURE AND MOTION SENSOR.
ENCLOSURE.
ENCLOSURE.





OLD DOMINION UTILITY SERVICES 2023 HARRISON ROLD FORT EUSTS, VIRGINIA, 23604

PERRUARY 2013

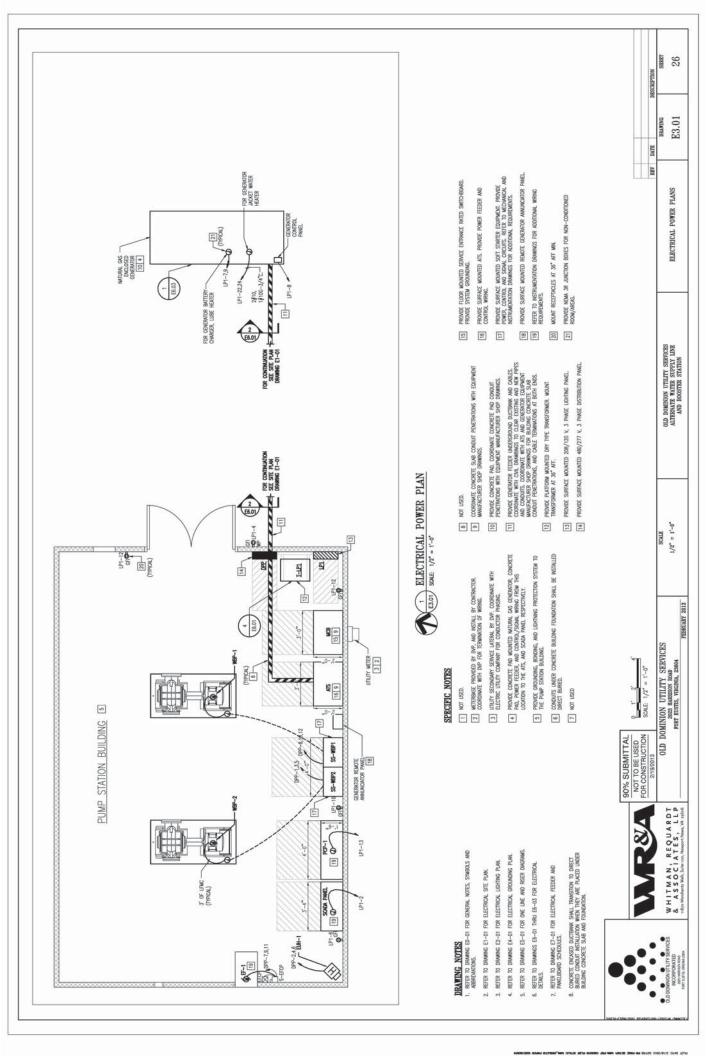
WHITMAN, REQUARDT & ASSOCIATES, LLP

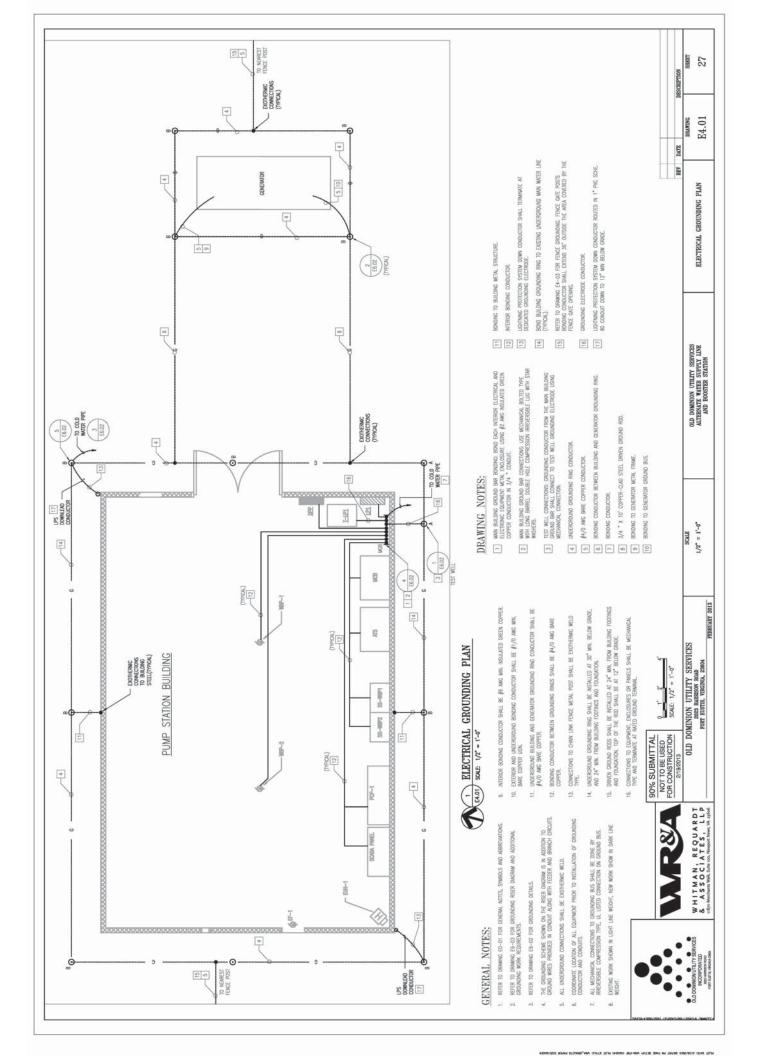
1/2" = 1'-0" SCALK

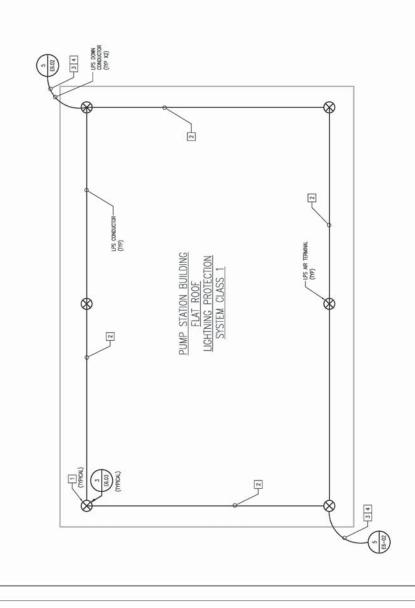
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

ELECTRICAL LIGHTING PLAN

E2.01 DRAWING REV DATE







DRAWING NOTES

- REFER TO DRAWING EG-01 FOR GENERAL NOTES, SYMBOLS, AND ABBREVATIONS.
- 2. REFER TO DRAWING E-602 AND E6-03 FOR ELECTRICAL DETAILS. 3. REFER TO DRAWING E6-03 FOR ELECTRICAL GROUNDING RISER DIAGRAM.

TI PROADE FLAT ROOF MOUNTING TYPE LIGHTNING PROTECTION SYSTEM CLASS 1 AR TERMINAL EQUIPMENT.

SPECIFIC NOTES

PROMDE LICHTINNG PROTECTION SYSTEM CLASS 1 COPPER CONDUCTOR.

3 PROMOE LIGHTNIG PROTECTION SYSTEM CLASS 1 COPPER DOWN CONDUCTOR, ROUTE IT WITHIN 1" PVC CONDUIT ALONG EXTERNAL BUILDING WALL, SUPPORT PVC CONDUIT AT 3 FT INTERNALS.

4 TERMINATE LPS DOWN CONDUCTOR AT DEDICATED GROUNDING ELECTRODE.

WHERE STRUCTURE YER BOWNE OF FREPROGNIC FROM THE AREA WHERE STRUCTURE YERE. BOWNE STO COCK OLD AND BROKENEN STEEL. TO ENSURE A GOOD ELECTRICALLY. COMMUNICS CONNECTION REPLACEMENT OF FREPROGNIC SE REQUIRE TO BOSINE STRUCTURAL MILEGRIT OF THE STRUCTURAL MILEGRIT OF THE STRUCTURAL MILEGRIT OF THE

ENSURE COMPATIBILITY OF MATERIALS AT RODE, INCLUDING BOOT, SPECIAL ACHESINE, SEALS, MOUNTING PAD, ETC.

- 3. MEN. BODES OF NOUCHARCE LOCATED ABOUT THE NOOT SUCH AS WERT, LEARNING, SAMME LOCATED ABOUT THE SOLL PREY HAITS, NOLLATION WENTS, LOCATED ABOUT SON, PREY HAITS, MINEN & -1" OF A LIGHTNANC CONDUCTOR OF BOARCD MEN. BOTH SE WITSTONNECTED TO THE LIGHTNANC CONDUCTOR SYSTEM.
- 4. NO BEND OF A CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN 90 DEGREES OR A RADIUS OF BEND OF LESS THAN 8".
- 8. ACTUAL JOB STE CONDITIONS MAY NECESSITATE SUGHT ALTERATIONS IN AR TERMINAL AND GROUND ROD LOCATIONS.
 - AR TERMINALS SHALL BE PLACED AT TOP OF SIDGE WITH EQUAL SPACING AND WITHIN 2"—O" OF OUTSIDE EDGE.
- 10, BOND ALL METALLC PIPES INCLUDING WATER, FIRE, GAS, SEMER, STORM, ETC., WHICH DITER THE STRUCTURE TO THE NEAREST DOWNLEAU, CHOUND ROD OR GROUND LOOP.
- 12. FOR SAKE OF CLARTY, EACH INDIVIDUAL ITEM OF LIGHTING PROTECTION MATERIALS MAS NOT BEEN LABELED ON THE ROOF PLAN. SEE INSTALLATION DETAILS.
- 13. THE LICHTHING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICIOUS MANNER SO THAT ALL COMPONENTS WILL BLEND IN WITH THE APPEARANCE OF THE BUILDING.
 - SEAL ENDS OF CONDUIT MOISTURE TIGHT WITH DUCT SEAL. OR LEAD WEDGE.
- 15. ALL CONDUIT, CONDUIT FASTBURBS AND MISCELANEOUS ACCESSORIES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- 17. COAT UNDERGROUND CONNECTIONS WITH COAL TAR EPOXY.

ELECTRICAL LIGHTNING PROTECTION SYSTEM ROOF PLAN

THE LIGHTING PROTECTION SYSTEMS SHALL BE INSTALED AND TESTED IN ACCORDANCE WITH THE PROVISIONS OF NFPA 780.

DRAWING DATE REV

CONDUCTORS SHALL INTERCONNECT ALL ARI TERMINALS AND SHALL FORM A TWO-WKY PATH PROME EACH ARI TERMINAL HORIZONALLY OR DOM/WARDED TO CONNECTIONS WITH GROUND TERMINALS.

ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED AT NOT MORE THAN 3"-0" MAXIMUM SPACING.

7. CONNECTIONS TO GROUND ROD OR GROUND LOOP CONDUCTOR SHALL BE WADE AT A POINT NOT LESS THAN 1'-0' BELOW GRADE AND Z'-0' AMMY FROM FOLMOMITON WALL.

BARE LICHTHING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM SURFACES.

16. ADJESINE TYPE FITTINGS ON ROOF SHALL BE SET IN PLACE. WITH AN APPLICATION OF COMPATIBLE ROOF CEMENT.

W HITMAN, REQUARDT & ASSOCIATES, LLP 1870 Merchants Wilk, Solite 100, Neuport News, VA 19506 OLD DOMINON UTILITY SERVICES
NCCRPORATED
STATEMENT STATEMENT SERVICES
FOR SERVICES •

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NOT TO BE USED
FOR CONSTRUCTION

SOME. 1/2" = 1'-0"

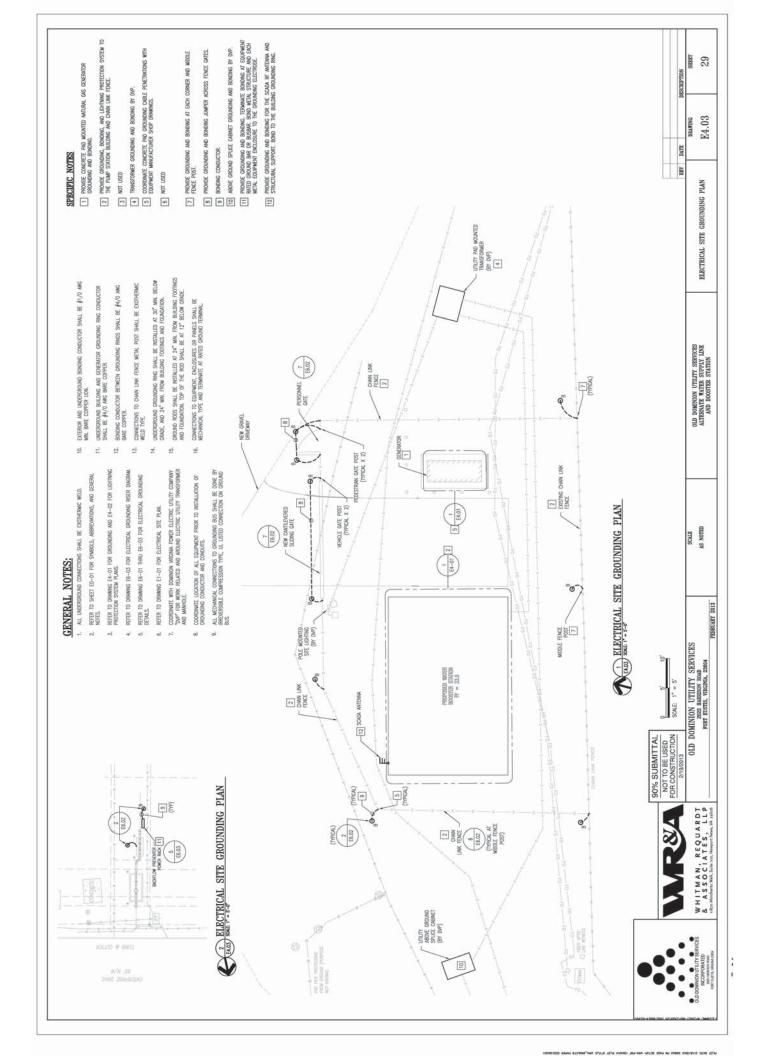
OLD DOMINION UTILITY SERVICES 2023 HARRISON ROAD FORT EUSTIS, VIRGINIA, 23604

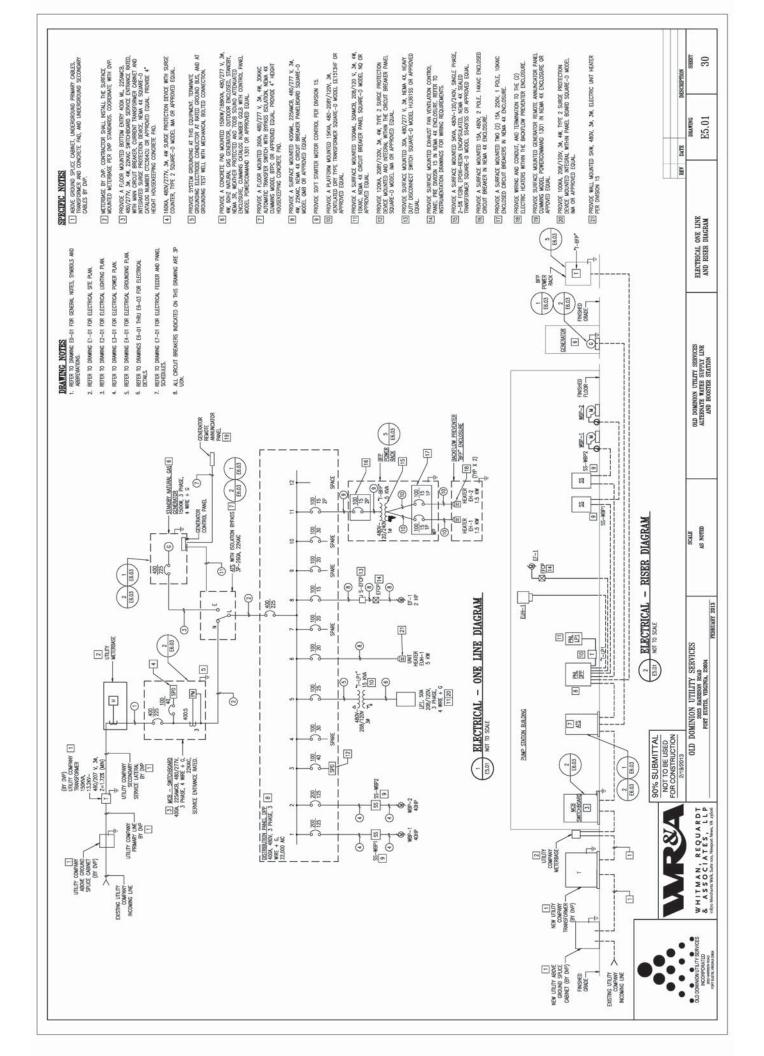
1/2 = 1,-0. SCALK PREBRUARY 2013

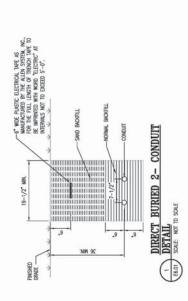
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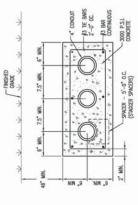
ELECTRICAL LIGHTNING PROTECTION SYSTEM ROOP PLAN

E4.02

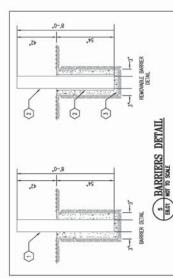








3 WAY CONCRETE ENCASED 2 UNDERGROUND DUCTBANK (BAD) NOT TO SOME



480-206/120V, 3 PHASE, DRY TYPE -TRANSFORMER

EDPANSON SHELDS

FINISHED -

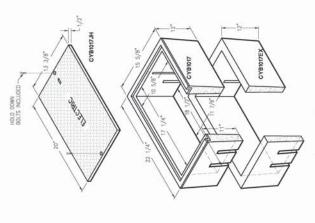
- **DETAIL, NOTES.**1. USE BARRIER TO PROTECT EQUIPMENT FROM POSSIBLE DAMAGE FROM VEHICLES.
- WHEN NECESSART, HEIGHT OF BARRIER ABOVE GROUND MAY BE INCREASED TO PREVENT LARGE VEHICLES FROM STRIKING PAD-MOUNTED EQUIPMENT.
- REFER TO DETALS ON DRAWING OML FOR CONCRETE TRANSFORMER & GENERATOR PAD PLAN VEWS.

DETAIL SPECIFIC NOTES

PLATFORM MOUNTED TRANSFORMER INSTALLATION DETAIL (BED) NOT 10 SOLE

(SIZE TO SUIT EQUIPMENT)

- (1) USE 6" RIGID GALVANZED STEEL CONDUIT, CUT TO 8" AND FILL WITH CONCRETE. BUCKED IN 3" OF CONCRETE, AS SHOWN.
- The remonale vence brefers, use 6" put schedule 40, cut to 54" and brosen in omerete. Arsen 8 of 94 vanzed stell corduit, with CVP, into PC conduit,
 - (3) USE 6" OF COMPACTED STONE OR GRAVEL FOR SUMP.



510	Ŀ
TRAF	AM AVOUR
FULL	ABBB
H-20 F	
LOAD;	
DESIGN LO	SCHOOL
O.A.E.	
ABOVE) PRECAST	
(SHOWN ABOVE) 3Y JENSEN PRECA	
ED BY	
B1017 ACTURE	
*STANDARD B1017 KIT (AS MANUFACTURED BY	CATALOG
.ST.	Ĺ

NUMBER	PRODUCT	DESCRIPTION	APPROX. WT (LBS.)
 CYB1017 	хов	REINFORCED CONCRETE	137
◆ CYB1017JH	g	STEEL CHECKER PLATE W/HOLD DOWN BOLTS	40
 CYBIOI7EX 	EXTENSION	12" HIGH REINFORCED CONCRETE	120

BEAD MET TO SOME

W HITMAN, REQUARDT & ASSOCIATES, LLP 1870 Merchans Wilk, Suite 100, Newport News, VA. 29606

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PERRUARY 2013 OLD DOMINION UTILITY SERVICES 2023 HARRISON ROLD FORT EUSTS, VIRGINIA, 23604

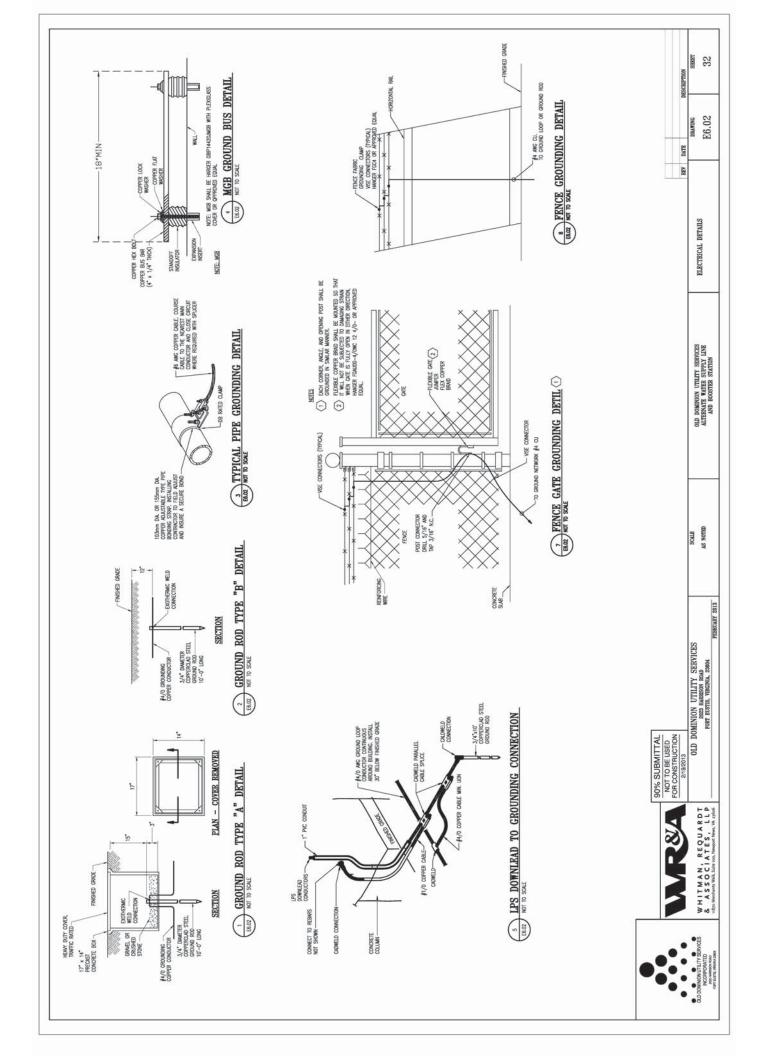
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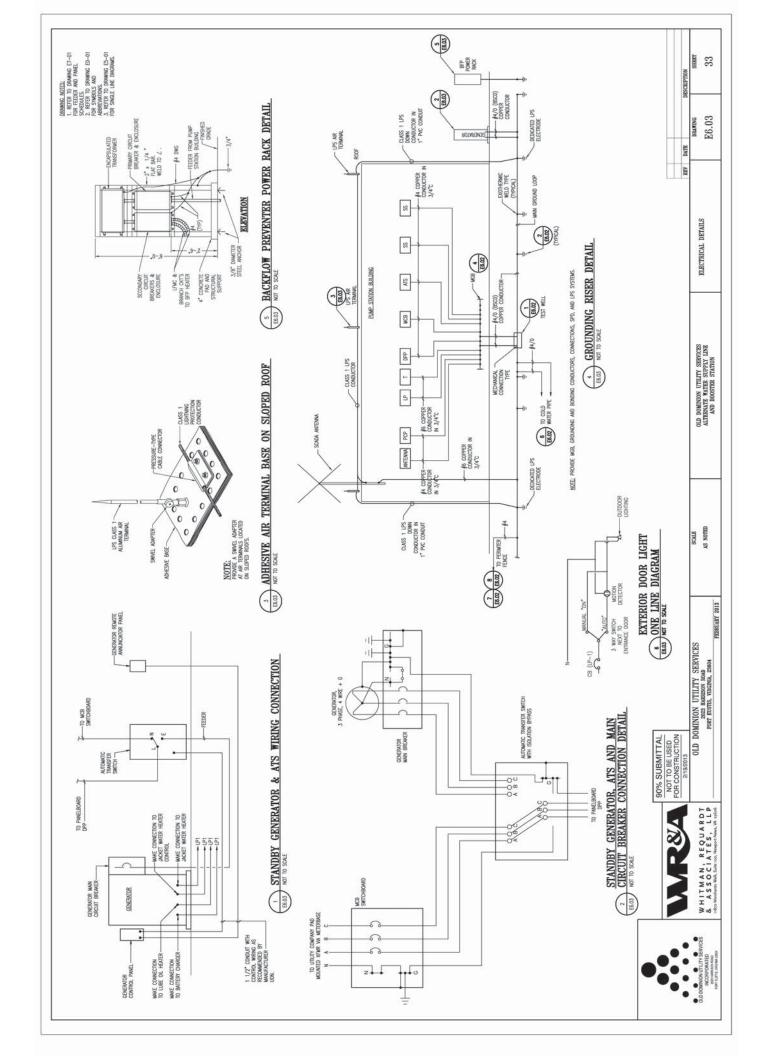
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

KEV ELECTRICAL DETAILS

DRAWING DATE

SHKET 31 E6.01





	REMARKS			UNDERGROUND						UNDERGROUND	LFMC					
The state of the state of	CONDUCTORS	3\$250 KCNIL, 1\$46.	3/250 KCMIL, 1/4G.	3\$250 KCMIL, 1\$46.	3/1/0, 1/66.	3#10, 1#10G.	3/6, 1/106.	#14, SHELDED TWISTED PAIR	3/12, 1/126.	2# 1/0, 1#16.	2/10, 1/126.	12# 14, 1#14 G				
	CONDUIT	'n	2 1/2	'n	1 1/2	3/4"	3/4"	-	3/4"	2 1/2	3/4"					
	FEEDER NO.	Θ	0	0	•	9	9	0	0	0	(2)	(3)			_	

	-0	LIGHT	NG	FIX	JIGHTING FIXTURE SCHEDULE	IEDULE		
FIXTURE	NUMBER	- TOTAL STATE		3	NAMPS	MANUFACTURER AND	34,707	SOUTH LOS
JAE .	UCSCHILININ	MOUNTING	8	WATTS	TYPE	CATALOG NUMBER	MEIS	ICEMARKS
⋖	NOUSIBAL FLUORESCHT DAND LOCATION, 1'X4' INSTANT START ELECTRONG BALLAST, ACRULG DIFFUSER.	PENDANT M.H.=9"-6" A.F.F.	n	32	82	LITHONIA DM-3-32-120-GEB10IS	120	
-	DECORATIVE WALL WOLNIED WET LOCATION, DIE CAST ALLAMNUM HOUSSING, DARK BRONZE, SEGMENTED REPLECTORS.	WALL M.H.=10'-0* A.F.F.	2	45	TRI	LITHONIA WST-2/4ZTRT-MD-120	120	COORDINATE GUIDOOR FIXTURE TYPE AND COLOR WITH ARCHITECT, PROVIDE WIRE GLARD
4	EMERGENCY BATTERY POWERED LIGHTING LINT.	SURFACE	175	3,5	INCANDESCENT	C00PER LM1-6-10.8-7.2	120	
•	EXIT LIGHT, NEMA, AX, DE CAST ALUANUM, UNIVERSAL CONFIGURATION, NICKEL-CAUMUM BATTERY AND SELF- DAGNOSTIC SYSTEM.	SURFACE	9	0.1	63	LV-S-1-G-120-DL	120	

	DISTRIBUTION PANELBOARD DPP	BUT	0	d l	ANE	E	0AR	O O	PP
SPD: 160KA 22,000 AC NEMA 12 ENCLOSURE			. 4 3	400 A 80/27 RFACE	400 AMP BUS 480/277 VOLTS SURFACE MOUNTED	s 🖴			3 PHASE, 4 WIRE + GROUND PAMEL LOCATION: PUMP ROOM
-	CIRCUI	CIRCUIT BREAKER	83	K	K	CIR	CIRCUIT BREAKER	EAKER	-
LOND SERVED	FRAME	TRIP	a.	Ŋ.	0,	a.		TRIP FRAME	LOAD SERVED
WBP-1	200	125	2	-	2	2	20	100	ELECTRIC UNIT HEATER EUH-1
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EXHAUST FAN EF-1	100	15	2	7	80	5	125	200	WBP-2
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SPARE	100	8	-	13	*	2	15	100	BPP POWER RACK
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DRAWING NOTES:

COORDINAT WITH RETRANSFICTION FORWARS FOR WIRHOW
REQUIREMENTS AND EQUIPMENT MANIFECTIONS FOR OBJECT PROC.

COMMENT, AND LINGTH, FIELD COGROMET FROM TO

INSTALLATION.

		PA	Ē	BO	PANELBOARD LP1	_	P1		
10,000 AIC RATING TVSS NEWA 12 ENCLOSURE			SEX	00 AN 98/12 5ACE	100 AMP BUS 208/120 VOLTS SURFACE MOUNTED	sa.			50 AMP MCB 3 PHASE, 4 WIRE + GROUND PANEL LOCATION: PUMP ROCM
-	CIRCI	CIRCUIT BRKR	a.	tion in	CKT.	Ö	CIRCUIT BRKR	BRKR	-
LOND SERVED	FRAME	TRIP	а	NO.	NO.	۵	TRIP	FRAME	LOAD SERVED
-POV-1	100	20	-	-	2	-	20	100	SCADA-1
PUMP ROOM LICHTS	100	20	-	m	4	-	20	100	-OUTSIDE RECEPTACLE
-OUTSIDE LIGHTS	100	20	-	S	9	-	20	100	-PUMP ROOM RECEPTACLE
-BATTERY CHARGER	100	20	-	7	00	-	20	100	GENERAL CONTROL PANEL
OIL HEATER	100	20	-	6	10	-	20	100	-PUMP ROOM RECEPTACLE
-PCV-2	100	20	-	:	12	-	20	100	-PUMP ROOM RECEPTACLE
PUMP CONTROL PANEL (PCP)	100	20	-	13	7	-	20	100	SPARE
IN-LINE THERMOSTAT	100	20	-	15	16	-	20	100	SPARE
SPARE	100	20	-	17	18	-	20	100	SPARE
SPARE	100	20	-	19	8	-	20	100	FLOW METER
SPARE	100	20	-	21	22	2	8	100	JACKET WATER HEATER (GEN)
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SPARE	100	20	-	52	26	2	20	100	SPARE
SPARE	100	20	-	27	28	.1	1	1	1000000
SPARE	100	20	-	53	33	-	20	100	SPARE
SPACE	1	1	1	31	32	1	1	1	SPACE
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	1		,	17	4.2	1	1		SONOS



WHITMAN, REQUARDT & ASSOCIATES, LLP

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PERKUARY 2013 OLD DOMINION UTILITY SERVICES 2023 HARBSON ROAD FORT RUSTIS, VIRGINA, 29004

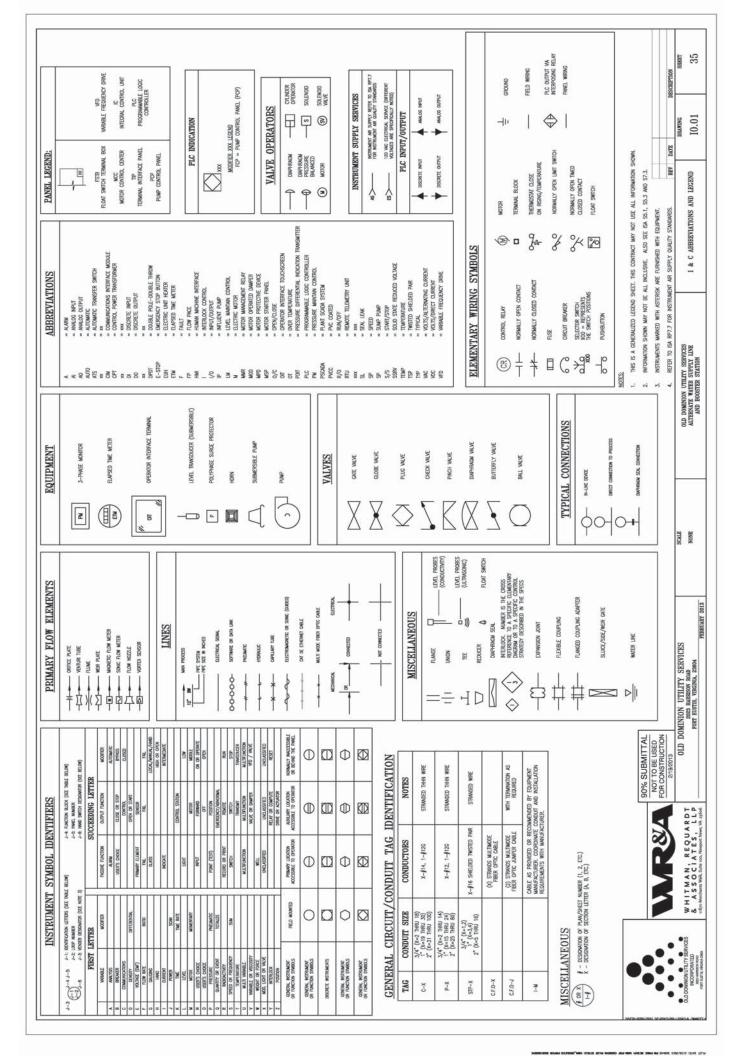
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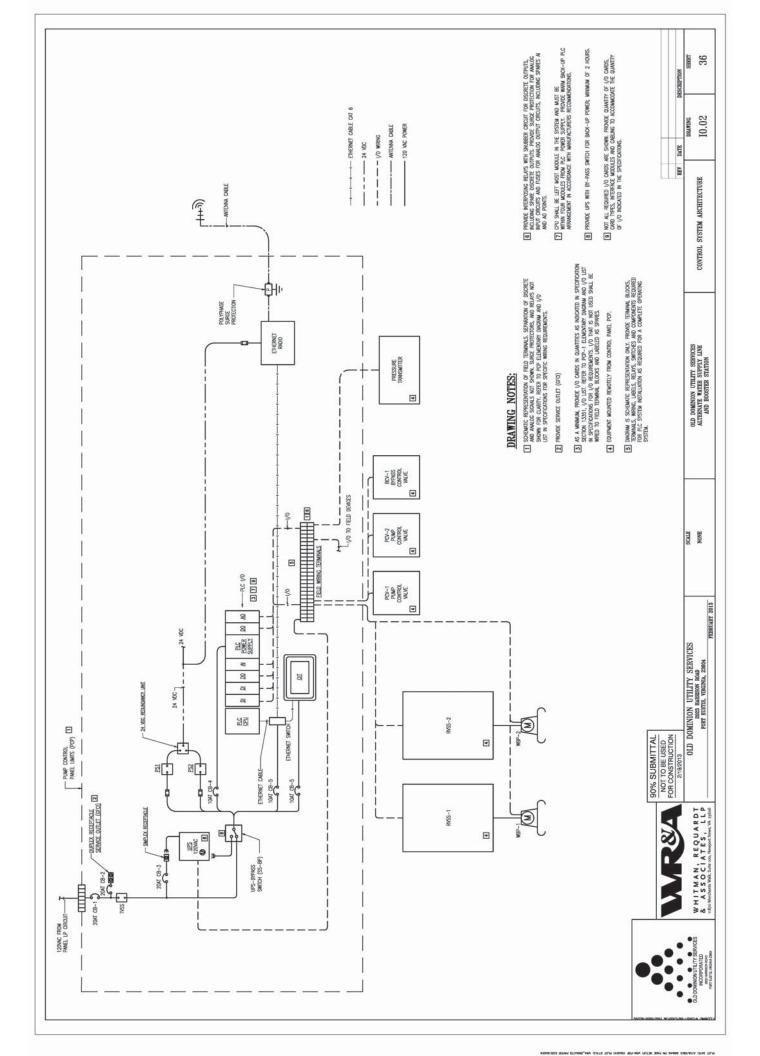
OLD DOMINION UTILITY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION

ELECTRICAL SCHEDULES

E7.01 DRAWING REV DATE

34



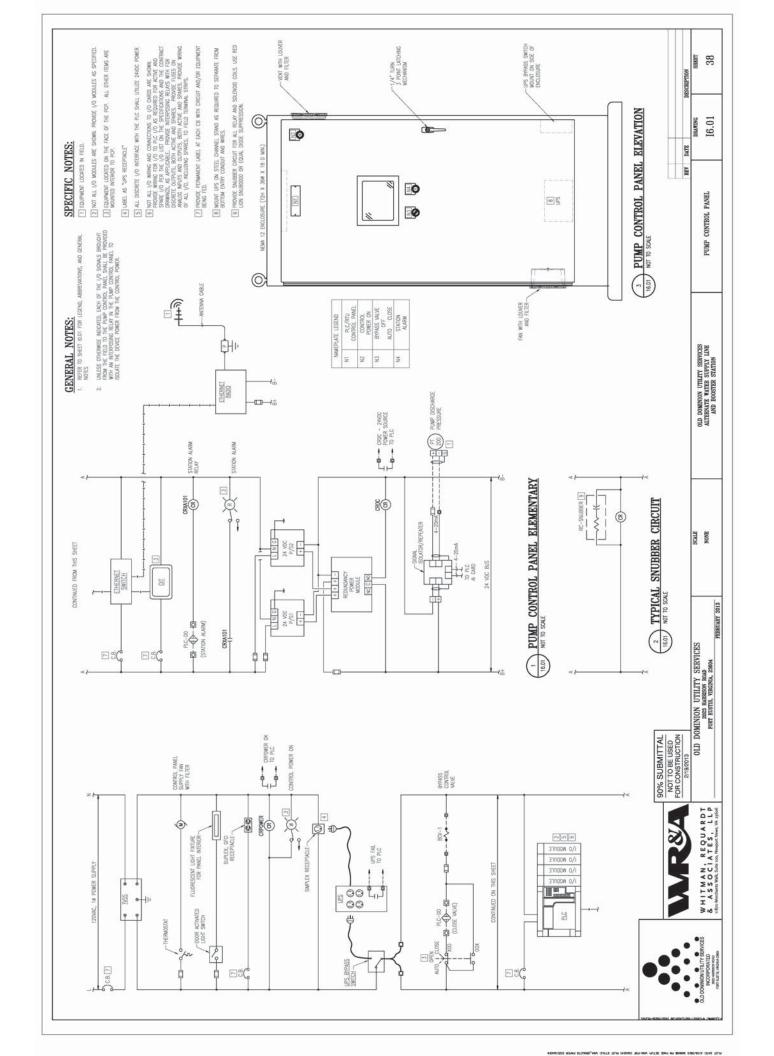


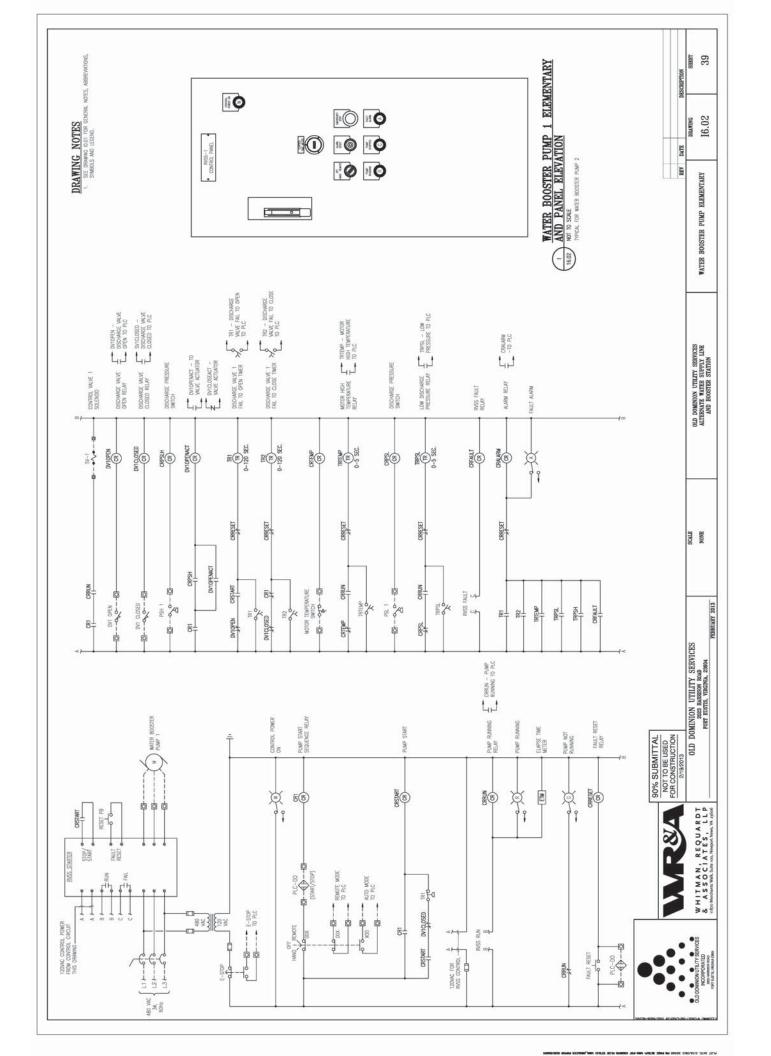
37 AND WAS ANTENA ON BUILDING MOUNTED ANTENA WAS, INSTALL ANTENA WITH WASTER PROCENCE AND SOLUTIONS, WITH MAKENTED STATES RECOMMENDATIONS, ANTENAN SHALL BE PUNKED DRECTION OF MASTER CONTROLLER. 2 MOTOR WINDING INTERNAL TEMPERATURE SWITCH.

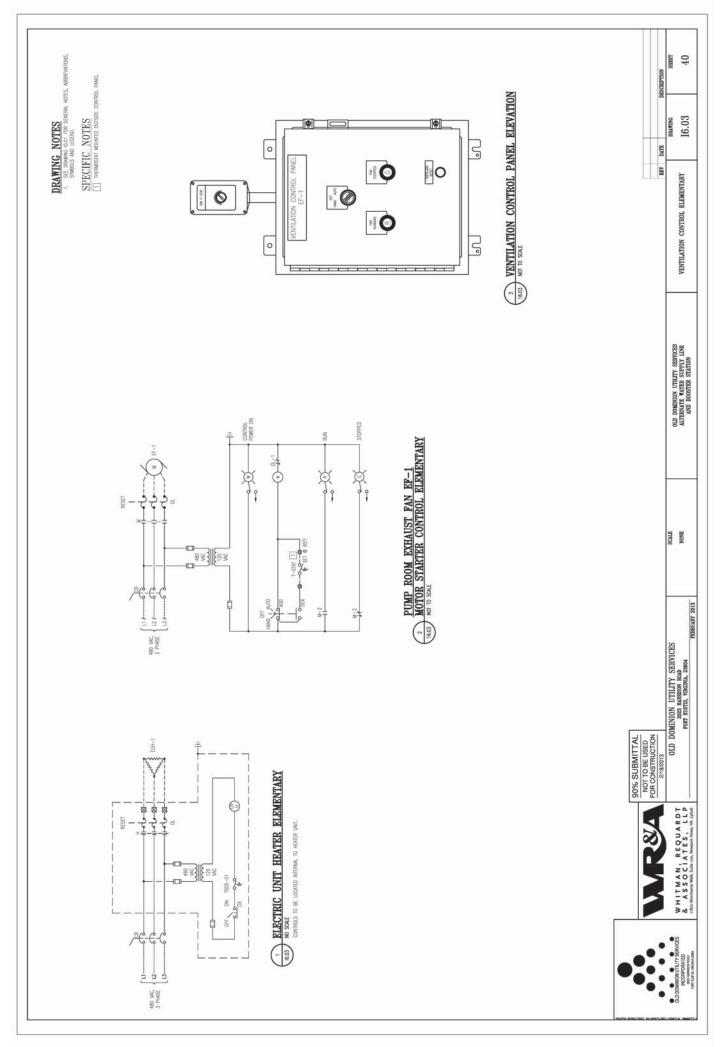
3 INSTALL DOOR POSITION SWITCH ON PRIMARY LOCKING DOOR. 12.01 DRAWING REV DATE GENERAL NOTES: SPECIFIC NOTES: INSTRUMENTATION & CONTROLS PLAN LOUVER L-1 OLD DOMINION UTHATY SERVICES ALTERNATE WATER SUPPLY LINE AND BOOSTER STATION 딦 SEE ELECTRICAL SHEETS MCB SEE CIVIL DRAWINGS FOR CONTINUATION -10" 90" BEND (TYP.) ATS PLAN

A PLAN

SOME 1/2" = 1'-0" 1/2" = 1'-0" RVSS-2 RVSS-1 SCALE T 10" CONTROL VALVE PERRUARY 2013 80 OLD DOMINION UTILITY SERVICES 2003 HARRISON BOAD FORT EUSTIS, VIRGINIA, 23604 10" CATE WLVE (TYP.) 90% SUBMITTAL
NOT TO BE USED
FOR CONSTRUCTION
SOME 1/2" = 1'-0" 7 2" C W/ ANTENNA CABLE 10° TEE EXHAUST FAN EF-1 DOMUST FAN CONTROL PANEL ELECTRIC UNIT HEATER EUH-1 PRESSURE SW. HIGH (TYP) 0 6" CATE VALVE 6" SURGE RELET VALVE 2 1/2's GALVANIZED SCH 40 STEEL PIPE -BULDING MOUNTED ANTENNA MAST SEE CIVIL DRAWINGS FOR CONTINUATION -YAGI RADIO ANTENNA W HITMAN, REQUARDT & ASSOCIATES, LLP







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Appendix C - Record of Non-Applicability



RECORD OF NON-APPLICABILITY (RONA) FOR CLEAN AIR ACT CONFORMITY

Joint Base Langley-Eustis, Newport News, Virginia

The proposed action falls under the Record of Non-Applicability (RONA) category and, therefore, is documented within this RONA.

Old Dominion Utilities Service (ODUS), in coordination with the Fort Eustis portion of Joint Base Langley-Eustis (JBLE-FE), is proposing to construct a new water supply point for the purposes of improving reliability of the water system in the instance of a break in the post's water main or maintenance on the Newport News supply line. The alternative water supply would serve as a secondary connection to JBLE-FE and provide necessary redundancy in the system. The proposed water supply point would tie into the existing 16-inch water main along Enterprise Drive, near the Icelandic Seafood Corporation building and Oakland Industrial Park, and extend approximately 2,450 linear feet south to tie into the JBLE-FE system. A precast pump station and maintenance access road would also be constructed as part of the proposed project. Construction would include activities such as excavation, site grading, trenching, and pipe installation.

In accordance with the General Conformity Rule of the Clean Air Act, Section 176(c)(4), the proposed project has been evaluated for the potential air emissions associated with its construction to determine if the maximum annual emissions would result in any violations of National Ambient Air Quality Standards (NAAQS) or maintenance plans established for the project area. The Clean Air Act requires the Environmental Protection Agency to set NAAQS for principal pollutants considered to be harmful to public health and the environment, which include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particle pollution (PM), and sulfur dioxide (SO₂).

Regulated under 40 CFR 93 (b), the *General Conformity Rule* states that no department, agency, or instrumentality of the Federal Government shall engage in, provide financial assistance for, approve, or support any activity that does not conform to applicable State Implementation Plans (SIP) designated for areas being in non-attainment for any established NAAQS or maintenance plans (maintenance areas). Threshold (*de minimis*) rates of emissions have been determined for by the Environmental Protection Agency (EPA) for federal actions with the potential to have significant air quality impacts or be incompatible with SIPs. If a proposed action, located in an area designated for non-attainment or maintenance, exceeds these *de minimis* threshold levels, a general conformity determination is required to show that the project would not interfere with the area's NAAQS goals.

JBLE-FE is located within the Hampton Roads Intrastate Air Quality Control Region (AQCR), as designated in 40 CFR 81.93. The existing air quality attainment status designations for Hampton Roads Intrastate AQCR are classified in 40 CFR 81.321¹ as:

¹ Attainment status designations obtained from 40 CFR §81, Subpart C (07-01-2012 Edition)

- better than national standards for SO₂;
- unclassifiable/attainment for CO;
- attainment for O3 (1-hour) standard;
- cannot be classified or better than national standards for NO₂;
- unclassifiable/attainment for O3 (8-hour);
- unclassifiable/attainment for PM2.5 (annual NAAQS);
- · unclassifiable/attainment for PM2.5 (24-hour NAAQS); and
- · not designated for Pb or PM10.

The Hampton Roads Intrastate AQCR was initially designated as a nonattainment area based on 1997 8-hour ozone standards; however, after several consecutive years of air quality improvements, the EPA approved its application for resignation to attainment in June 2007. Since then, Hampton Roads has been designated as a maintenance area for 8-hour ozone. As a result, a *General Conformity* applicability analysis has been conducted for the alternative water supply line into JBLE-FE to determine if the proposed action would exceed established *de minimis* thresholds for this air quality contaminant. Table 1 compares the calculated emissions and EPA's *de minimis* standards. Because ozone forms from other emissions, the analysis focuses on ozone precursors that include volatile organic compounds (VOCs), sulfur oxides (SOx), and nitrogen oxides (NOx).

Table 1: Comparison of Construction and Operation Emissions to General Conformity Rule De Minimis Thresholds

		Emisŝions (tons/year)	
	VOCs	SOx ·	NOx
2013 Construction Emissions	0.0085	.0008	0.545
Annual Operation Emissions	0	0	0
De Minimis Thresholds ¹	50	100	100
Threshold Exceeded?	No	No	No

EPA threshold for maintenance areas (40 CRF 93§153).

The result of the analysis concludes that the proposed project would remain below the *de minimis* threshold for an 8-hour ozone maintenance area and would be exempt from the requirements of the *General Conformity Rule*. JBLE-FE is in attainment for all other area criteria pollutants; therefore, these pollutants are not subject to a conformity review. Supporting documentation and calculations for these emissions findings are included in the pages that follow.

RONA APPROVAL

Mr. Michael Shaffer

Air Program Manager

Civil Engineer Division,

Environmental Element, Fort Eustis, VA

Date-15 March-2013

June 2013

AIR QUALITY CALCULATIONS AND ANALYSIS

Air pollutant emissions associated with the project's operational activities would be too minimal to model since the sole source of emissions would be the intermittent use of a backup generator for the proposed pump station, during occasional power failures. As a result the alternative water supply line would not result in any perceivable emissions of criteria pollutants once it is installed.

Pollutant emissions during the construction of the proposed project would be expected to occur and have been calculated based on the anticipated schedule for project completion. Construction of the proposed project would consist of a simple pipe laying and erection of a precast pump station building. The work is scheduled to begin in late February 2013 and be completed by June 2013.

Air emissions associated with construction phase would directly correlate with the running of heavy equipment during construction and the delivery of construction materials (concrete and workers). The estimated construction emissions were calculated by considering the duration of construction (120 days), the construction equipment anticipated to be used, the estimated number of days each piece of equipment would be used, and the estimated portion of those days that the piece would be running. The construction equipment considered for each phase is listed below:

- 1. Front End Loader
- 2. Dump Truck
- 3. Water Truck
- 4. Excavator

- 5. Concrete Truck
- 6. Compactor/Tamper
- 7. Concrete Truck
- 8. Dozer/Crawler Tractor

Emissions Calculations and Conclusions

Standard emissions factors and the predicted horsepower of each listed construction implement were used to derive an approximate calculation of emissions during each phase of construction. For several of the equipment pieces, specific emissions factors could not be obtained; therefore, some assumptions had to be made. The total emissions for each year of construction are intended to be "planning level" estimates to be used for comparison to the *de minimis* thresholds for the 8-hour ozone maintenance area (see table below). The computations and assumptions are included in the calculation sheet that follows this document.

Construction Phase	To	otal Emissio	ns
Construction Phase	voc	NOx	SOx
Total Emissions for Project (tons)	0.025978	1.657029	0.002391
Total Emissions per Year (tons/year)	0.008541	0.544777	0.002391
de minimis Threshold (tons/year)	50	100	100
Exceed Threshold?	No	No	No

Description of Units and Factors Used for Emissions Calculations

- Equipment Power: Rated equipment power in horsepower
- Utilization Factor: Anticipated portion of 8-hour workday in which equipment will be used
- Emission Factor: Characteristic of each piece of equipment in grams per horsepower-hour. Carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter (PM₁₀), carbon dioxide (CO₂), and methane (CH₄) were derived from 2013 average emission factors listed in SCAQMD's Off-road Mobile Source Emission Factors database (2008). Factors for volatile organic compounds were unavailable through this database and were obtained for 2005 (Koizumi 2005).
- Quantity of Equipment Set-Ups: Number of equipment rigs running at any given time during the work day
- Total Project Emissions: Sum of emissions for each phase of construction
- Total Emissions per Year: Total per year emissions based on the complete project duration

Formulas for Calculating Emissions

The formulas used in the emissions calculations are provided below:

Emissions (pounds per day) = Equipment Power (horsepower) x Utilization Factor x Emission Factor (grams per horsepower-hour) x 0.00220462 (pounds per gram) x 8 (hours per day)

Total Emissions (pounds) = Emissions per day x Total Equipment Days

Total Emissions per Phase (tons) = Sum of Total Emissions/2000 (pounds)

Total Emissions per Year (tons) = Total Emissions in Tons x (Total Project Workdays/365)

REFERENCES CONSULTED

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Appendix D - Wetland Delineation Memo



MEMORANDUM

Date: 12/7/2012

To: John Thomas,WRA

From: David Kwasniewski

Subject: Fort Eustis Alternate Water Source Jurisdictional

Determination Reconnaissance

CC:

Work Order Number: 19227-002

Contract Number: N/A

Project: Fort Eustis Alternate Water Source

On November 19, 2012 Whitman, Requardt and Associates environmental scientist David Kwasniewski and engineer John Thomas performed a wetland delineation of the Fort Eustis Alternate Water Source project. The site is located north of the Fort Eustis Military Base and south of Enterprise Drive between address 190 and 182 Enterprise Drive Newport News, VA.

The study area drains toward Skiffes Creek, which ultimately drains into the James River and the Chesapeake Bay. The United States Geological Survey recognizes the study area as part of the Lower James watershed, hydrological unit code (HUC) 02080206. Overall, the study area is relatively flat and drains to the west. The entire project area is forested. Common tree species found were willow oak (*Quercus phellos*), red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), Amercian Holly (*Ilex opaca*), and loblolly pine (*Pinus taeda*).

Section 404 of the Clean Water Act requires that waters of the U.S., including wetlands, be identified and delineated. The project area was traversed to identify jurisdictional areas. Our field visit found two wetland areas approximately ten to fifteen foot by 8 foot (80 to 120 square feet) in size. These areas were not flagged in the field. Both of the areas are located along the eastern portion the project area and are not hydrologically connected to water of the U.S.. Therefore, these wetlands are considered to be isolated. The dominant wetland vegetation are cattail (*Typha latifolia*), soft rush (*Juncus effuses*) and woolgrass (*Scirpus cyperinus*). No standing water was found. However water stained leaves shows evidence that hydrology is present.





9030 Stony Point Parkway, Suite 220, Richmond, Virginia 23235 www.wrallp.com Phone: 804.272.8700 Fax: 804.272.8897



12/7/2012 Page 2 19227-002

One soil profile located in uplands was taken near the northern portion the project area during the delineation. The soil characteristics represent the majority of the site:

Depth from soil surface

- 0-2 inches were roots mixed/loam with a color of 7.5YR 3/1,
- 2-9 inches was a clay loam with a color of 10YR 5/2, and
- 9-17 inches was clay with a color of 10YR 5/3 and mottles 10YR 5/2

Permitting

The permitting requirements and permit timelines are driven by the nature of the proposed activity. The permit process should be initiated early in final design after field surveys and alignment selection is finalized. During the planning and design phase of this project all efforts will be made to avoid and minimize impacts to the maximum extent practicable.

Wetlands on site lack a surface connection to the waters of the U.S. and are believed to be isolated. The USACE does not regulate isolated wetlands. However, a Jurisdictional Waters Determination Request is still necessary from the USACE to confirm the wetlands on site. The Virginia Department of Environmental Quality (DEQ) regulates impacts into isolated wetlands. Due to the nature of this project it is anticipated that these wetland areas will be temporarily impacted during the construction of this project. Coordination with the DEQ will be required.

David Kwasniewski - Environmental Scientist

Appendix E - Federal Consistency Determination





COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219 Mailing address: P.O. Box 1105, Richmond, Virginia 23218 Douglas W. Domenech Secretary of Natural Resources TDD (804) 698-4021

www.deq.virginia.gov

David K. Paylor Director

(804) 698-4000 1-800-592-5482

May 16, 2013

Mr. Timothy P. Christensen 733 Mission Support Group Civil Engineer Division, U.S. Air Force Joint Base Langley-Eustis 1407 Washington Boulevard Fort Eustis, Virginia 23604

RE:

Environmental Assessment and Federal Consistency Determination for the Alternate Water Supply System and Booster Station at Joint Base Langley-Eustis, Newport News, (DEQ 13-060F)

Dear Mr. Christensen:

The Commonwealth of Virginia has completed its review of the above-referenced document. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents submitted under the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. The following agencies and planning district commission joined in this review:

Department of Environmental Quality Department of Game and Inland Fisheries Department of Conservation and Recreation Department of Health Virginia Marine Resources Commission Department of Forestry Department of Transportation Department of Historic Resources Hampton Roads Planning District Commission

In addition, the Department of Agriculture and Consumer Services and the City of Newport News were invited to comment on the proposal.

PROJECT DESCRIPTION

The Departments of the Army and Air Force (Army/Air Force) propose to construct an alternate water supply system and booster station on Joint Base Langley-Eustis (JBLE-FE) at Fort Eustis in the City of Newport News. Old Dominion Utility Service (ODUS) owns and operates the water and sanitary sewer facilities at JBLE-FE and would install the new water supply point. Construction would include excavation, site grading, trenching and pipe installation. In addition, a meter vault, backflow preventer, water booster station, 2,450 linear feet of buried 12-inch pipe, and a 1,700-linear foot long by 12-foot wide gravel maintenance access road would be installed. A secondary connection would provide redundant water service to account for potential future water outages, which would improve system reliability. Two primary alternatives for the proposed action were identified and evaluated. Alternative 1, on Shellabarger Drive and Alternative 2, in the Oakland Industrial Park. Alternative 2 received the highest score and is the least expensive alternative due to its shorter length and lack of a river crossing. Accordingly, Alternative 2, in the Oakland Industrial Park, was selected as the preferred alternative. In order to meet demands, construction shall be completed and the alternate water supply system will be fully operational no later than September 30, 2013.

CONCLUSION

Provided activities are performed in accordance with the recommendations which follow in the Impacts and Mitigation section of this report, this proposal is unlikely to have significant effects on ambient air quality, water quality, wetlands, important farmland, forest resources, and historic resources. It is unlikely to adversely affect species of plants or insects listed by state agencies as rare, threatened, or endangered.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Surface Waters and Wetlands. According to the EA (page 22), no streams were identified on affected private land during field visits to the area. However, a perennial stream is located immediately adjacent to the study area within Training Area 2. The perennial stream runs beside and under (through a culvert system) the route along the main Training Area 2 Maneuver Trail. There will be no direct impact to the perennial stream in terms of mechanical alteration.

The EA (page 20) states that two wetlands were identified on the private land within the limits of the project. Construction would impact approximately 0.003 acres of palustrine emergent (PEM) wetlands located on private property. No wetlands on JBLE-FE property will be impacted. Proposed impacts to two small isolated wetlands may require a Joint Permit Application be submitted to the regulatory agencies. No mitigation is anticipated to be required for this project due to minimal size of the impacts.

- 1(a) Agency Jurisdiction. The State Water Control Board (SWCB) promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a state permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal *Clean Water Act* § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Water Protection/Compliance, within the DEQ Division of Water Quality Programs. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities.
- **1(b) Agency Findings.** The VWPP program at DEQ's Tidewater Regional Office (DEQ-TRO) finds that the project, as proposed, will involve minor impacts to surface waters. Therefore, VWPP authorization is required.
- 1(c) Recommendations. In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:
 - Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable.
 - Preserve the top 12 inches of trench material removed from wetlands for use as wetland seed and root-stock in the excavated area.
 - Design erosion and sedimentation controls in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to State waters. The controls should remain in place until the area is stabilized.
 - Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
 - Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The applicant should take all appropriate measures to promote revegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
 - Place all materials which are temporarily stockpiled in wetlands, designated for
 use for the immediate stabilization of wetlands, on mats, geotextile fabric in order
 to prevent entry in State waters. These materials should be managed in a
 manner that prevents leachates from entering state waters and must be entirely
 removed within thirty days following completion of that construction activity. The
 disturbed areas should be returned to their original contours, stabilized within

Alternate Water Supply System and Booster Station Joint Base Langley-Fort Eustis

- thirty days following removal of the stockpile, and restored to the original vegetated state.
- Flag or clearly mark all non-impacted surface waters within the project or right-ofway limits that are within 50 feet of any clearing, grading, or filling activities for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Employ measures to prevent spills of fuels or lubricants into state waters.
- 1(d) Requirements. Surface water or wetland impacts will require authorization from DEQ-TRO under the VWPP program prior to any land disturbance. The project may require VWPP issued by DEQ-TRO or a U.S. Army Corps of Engineers (Corps) Nationwide Permit which has received Section 401 Water Quality Certification from DEQ.

The initiation of the VWPP review process is accomplished through the submission of a Joint Permit Application (JPA) (form MRC 30-300) to the Virginia Marine Resources Commission (VMRC). Upon receipt of a JPA for the proposed surface waters impacts, VWPP staff at DEQ-TRO will review the proposed project in accordance with the VWPP program regulations and guidance.

- **1(e) Conclusion.** Provided that a VWPP or a Corps Nationwide Permit which has received Section 401 Water Quality Certification is obtained and complied with, the project will be consistent with the VWPP Program.
- 2. Subaqueous Lands Impacts. The Federal Consistency Determination section of the EA (Appendix E) states that no subaqueous land use is proposed under this action.
- **2(a) Agency Jurisdiction.** The Virginia Marine Resources Commission (VMRC), pursuant to Section 28.2-1200 *et seq.* of the *Code of Virginia*, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth.

VMRC serves as the clearinghouse for the JPA used by the:

- U.S. Army Corps of Engineers for issuing permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act;
- · DEQ for issuance of a Virginia Water Protection Permit;
- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands; and
- local wetlands board for impacts to wetlands.
- **2(b) Agency Findings.** VMRC finds that the proposed construction elements of the project will not impact state-owned subaqueous bottom based on information in the EA. Therefore, a permit from VMRC will not be required.

For additional information, contact VMRC, Mike Johnson at (757) 247-2255.

- **3. Erosion and Sediment Control and Stormwater Management.** According to the EA (page 22), construction impacts could have a short-term effect on water resources by increasing stormwater runoff from the site and carrying sediment and contamination loads into nearby waters during heavy rain. Construction activities would comply with the *Virginia Erosion and Sediment Control Regulations* and the *Virginia Stormwater Management Regulations* to avoid or minimize erosion.
- **3(a) Agency Jurisdiction.** DCR's Division of Stormwater Management (DSM) administers the *Virginia Erosion and Sediment Control Law and Regulations* (*VESCL&R*) and *Virginia Stormwater Management Law and Regulations* (*VSWML&R*).

3(b) Requirements.

(i) Erosion and Sediment Control and Stormwater Management Plans

According to DCR-DSM, the Army/Air Force and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with the VESCL&R, VSWML&R (including coverage under the general permit for stormwater discharge from construction activities), and other applicable federal nonpoint source pollution mandates (e.g., Clean Water Act Section 313 and federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil or dredge spoil areas, or related land conversion activities that disturb 10,000 square feet or more (2,500 square feet or more in designated Chesapeake Bay Preservation Areas (CBPAs)), or areas on federal lands which are analogous to CPBAs, would be regulated by VESCL&R and VSWML&R. Accordingly, the Army/Air Force must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. The Army/Air Force is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL §10.1-567].

(ii) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities

DCR is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre (2,500 square feet or more in areas analogous to CBPAs) is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at http://www.dcr.virginia.gov/stormwater_management/stormwat.shtml. [Reference: Virginia Stormwater Management Act §10.1-603.1 et seq.; VSMP Permit Regulations 4 VAC-50 et seq.]

- **4. Chesapeake Bay Preservation Areas.** The EA does not discuss impacts to areas analogous to Chesapeake Bay Preservation Areas.
- **4(a) Agency Jurisdiction.** The Department of Conservation and Recreation's Division of Stormwater Management Local Implementation (LI) (formerly the Division of Chesapeake Bay Local Assistance) administers the Chesapeake Bay Preservation Act (Virginia Code sections 10.1-2100 through 10.1-2114) and *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 10-20 et seq.).
- **4(b) Agency Comments.** In the City of Newport News, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include:
 - tidal wetlands,
 - certain non-tidal wetlands,
 - · tidal shores, and
 - a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow.

RMAs, which require less stringent performance criteria, include:

- · one hundred year floodplains,
- highly erodible soils (including steep slopes), and
- · a minimum 100-foot area landward of the inland boundary of the RPA.
- **4(c) Agency Findings.** DCR-DSM finds that limited clearing and land disturbance is proposed in areas that would be designated as RMA and RPA and subject to locally enforced CBPA regulations.

4(d) Requirements.

(i) Construction in RPA and RMA

RPAs and RMAs are subject to the general performance criteria of 4 VAC 50-90-130 and must:

- minimize land disturbance,
- · preserve indigenous vegetation, and
- · minimize impervious cover.

If land disturbance is to exceed 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality protection provisions (4 VAC 3-20-17 *et seq.*) of the *Virginia Stormwater Management Regulations* (4 VAC 3-20) shall be satisfied.

In addition, the portions of the project within the RPA are subject to the development criteria of 4 VAC 50-90-140.

(ii) Water Line Exemption

The construction, installation, operation and maintenance of water lines within a Chesapeake Bay Preservation Area are conditionally exempt from the *Chesapeake Bay Preservation Area Designation and Management Regulations* (4 VAC 50-90-150 B 2), provided that:

- to the degree possible, the location of such facilities should be outside RPA lands;
- no more land shall be disturbed than is necessary to provide for the proposed utility installation;
- all such construction, installation and maintenance of such utilities shall be in compliance with all applicable state and federal permits and designed and conducted in a manner that protects water quality; and
- any land disturbance exceeding an area of 2,500 square feet complies with all erosion and sediment control requirements as referenced above.

(iii)1998 Federal Agencies' Chesapeake Ecosystem Unified Plan

The 1998 Federal Agencies' Chesapeake Ecosystem Unified Plan requires the signatories to fully cooperate with local and state governments in carrying out voluntary and mandatory actions to comply with the management of stormwater. The signatories also committed to encouraging construction design that minimizes natural area loss on new and rehabilitated federal facilities, adopts low impact development and best management technologies for stormwater and erosion and sediment control, and reduces impervious surfaces.

(iv) Chesapeake 2000

In addition, the Chesapeake 2000 agreement committed the government agencies to a number of sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued Directive No. 01-1: Managing Storm Water on State, Federal and District-owned Lands and Facilities, which includes specific commitments for the signatories to lead by example with respect to stormwater control.

- **4(e) Conclusion.** DCR-DSM-LI concludes that the proposed activity would be consistent with the Chesapeake Bay Preservation Act and *Regulations* provided the project adheres to the above requirements.
- 5. Air Quality. According to the EA (page 16), air quality impacts resulting from the proposed project would be limited to the intermittent use of a backup generator for the pump station as well as pollutant emissions associated with construction activities, including airborne dust from ground disturbance, operations, combustion byproducts from construction equipment and worker travel during construction. The amount of emissions generated during the construction and subsequent operation of the alternative water supply would be minor and would not substantially affect regional air quality in or around Newport News and the Hampton Roads Intrastate Air Quality Control Region (AQCR).
- **5(a) Agency Jurisdiction.** DEQ's Division of Air Pollution Control, on behalf of the State Air Pollution Control Board, develops and administers the *State Air Pollution Control Board Regulations for the Control and Abatement of Air* Pollution pursuant to the Air Pollution Control Law. DEQ is charged to carry out mandates of the state law and regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The Division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate regional office is directly responsible for issuing necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. As a part of this mandate, environmental documents for new projects to be undertaken in the State are also reviewed. Some projects require additional evaluation under the general conformity provisions of state and federal law.
- **5(b) Agency Findings.** According to the DEQ Air Division, the project site is located in an ozone maintenance and emission control area for oxides of nitrogen (NOx) and volatile organic compounds (VOC).

Alternate Water Supply System and Booster Station
Joint Base Langley-Fort Eustis

5(c) Recommendation. The Army/Air Force should take all reasonable precautions to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

5(d) Requirements.

(i) Fugitive Dust

Fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution*. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- · Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Open Burning

If project activities include the open burning or use of special incineration devices for the disposal of land clearing debris, this activity must meet the requirements of 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100 of the *Regulations* for open burning, and it may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. The project proponent should contact City of Newport News officials to determine what local requirements, if any, exist.

(iii) Fuel Burning Equipment

The operation of the backup generator may require permitting from DEQ prior to beginning construction of the facility (9 VAC 5-80, Article 6, Permits for New and Modified Sources). The project proponent should contact DEQ-TRO for guidance on whether this provision applies.

- **6. Solid and Hazardous Waste Management.** According to the EA (page 29), solid wastes in the project area are collected and disposed of in the landfill off Big Bethel Road in the City of Hampton. Recycling collection is provided both on JBLE-FE and in the City of Newport News. Less than one acre of land would be disturbed as a result of the proposed action. Excavation depths would be limited to eight feet. Given the minimal anticipated ground disturbance, hazardous materials impacts are not anticipated.
- **6(a) Agency Jurisdiction.** Solid and hazardous wastes in Virginia are regulated by the Virginia Department of Environmental Quality, the Virginia Waste Management Board

(VWMB) and the U.S. Environmental Protection Agency. They administer programs created by the federal Resource Conservation and Recovery Act, the Comprehensive Environmental Response Compensation and Liability ("Superfund") Act, and the Virginia Waste Management Act. DEQ administers regulations established by the Waste Management Board and reviews permit applications for completeness and conformance with facility standards and financial assurance requirements. All Virginia localities are required, under the *Solid Waste Management Planning Regulations*, to identify the strategies they will follow on the management of their solid wastes, to include items such as facility siting, long-term (20-year) use, and alternative programs such as materials recycling and composting.

6(b) Agency Comments. According to DEQ's Division of Land Protection and Revitalization (DEQ-DLPR) (formerly the Waste Division), solid and hazardous waste issues were generally addressed in the submission, and the EA indicated a search of solid and hazardous waste databases was performed. The DEQ DLPR conducted a cursory database search within zip code 23604, and finds that five Resource Conservation and Recovery Act (RCRA) sites, one Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) site, and three petroleum release sites were identified. A list of these sites is included in DEQ-DLPR comments attached to this response.

6(c) Recommendations.

(i) Data Base Search

DEQ-DLPR recommends that the Army/Air Force conduct a data base search of the project study area to identify any solid and hazardous waste sites that may impact or be impacted by the project. A list of data bases and guidance on performing searches is included in the comments submitted by DEQ-DLPR and attached to this response.

(ii) Pollution Prevention

DEQ encourages all projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All hazardous wastes should be minimized, and managed properly

6(d) Requirements.

(i) Solid and Hazardous Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. All construction and demolition debris, including excess soil, must be characterized in accordance with the *Virginia Hazardous Waste Management Regulations* prior to disposal at an appropriate facility.

(ii) Asbestos-containing Material and Lead-based Paint

Affected structures should be checked for asbestos-containing materials (ACM) (such as insulation) and lead-based paint (LBP) prior to the installation of upgrades. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, state regulations 9 VAC 20-80-640 for ACM and 9 VAC 20-60-261 for LBP must be followed.

Questions or requests for further information may be directed to DEQ-LPRD, Steve Coe at (804) 698-4029.

7. Natural Heritage Resources. According to the EA (page 25), a search of DCR's Natural Heritage Resources database indicated that there are no natural heritage resources within a two-mile radius of the project area.

7(a) Agency Jurisdiction.

(i) Department of Conservation and Recreation

The mission of the Virginia Department of Conservation and Recreation (DCR) is to conserve Virginia's natural and recreational resources. The DCR-Natural Heritage Program's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. The Virginia Natural Area Preserves Act, 10.1-209 through 217 of the Code of Virginia, was passed in 1989 and codified DCR's powers and duties related to statewide biological inventory: maintaining a statewide database for conservation planning and project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources (the habitats of rare, threatened, and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) Department of Agriculture and Consumer Services

The Endangered Plant and Insect Species Act of 1979, Chapter 39, §3.1-102- through 1030 of the *Code of Virginia*, as amended, authorizes the Virginia Department of Agriculture and Consumer Services (VDACS) to conserve, protect and manage endangered species of plants and insects. The VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the U.S. Fish and Wildlife Service, DCR-DNH and other agencies and organizations on the recovery, protection or conservation of listed threatened or endangered species and designated plant and insect species that are rare throughout their worldwide ranges. In those instances where recovery plans, developed by the U.S. Fish and Wildlife Service, are available, adherence to the order and tasks outlines in the plans are followed to the extent possible.

7(b) Agency Findings. DCR-DNH searched its Biotics Data System for occurrences of natural heritage resources from the project area.

(i) Alternative 1: Shellabarger Drive

According to the information currently in DCR files, Hazel dodder (Cuscuta coryli, G5?/S2?/NL/NL) has been historically documented within the project site. Hazel dodder is a parasitic herb placed either under its own dodder family (Cuscutaceae) or within the morning glory (Convolvulaceae) family. It consists of an orange to yellow stem twining on a host plant which includes a variety of herbaceous and woody species (Weakley in prep.). Small, 4-5 parted, fleshy, white flowers form dense to loose clusters in mid to late summer. Found over much of the U.S. and Canada, hazel dodder is scattered around Virginia, with occurrences in the Coastal Plain, Ridge and Valley, and Northern Blue Ridge physiographic provinces. In Virginia it has been documented in highly variable, at least partially open, habitat including coastal marshes, dry greenstone glades in the Blue Ridge, and in dry forests over limestone in the Ridge and Valley. Threats include habitat destruction and herbicides. As some members of this genus can cause damage to cultivated plants, rare species of Cuscuta may be incidentally destroyed by efforts to protect crops (Cusick and Burns 1984). In order to accurately distinguish this rare dodder from more common species, surveys in Virginia need to be conducted during its blooming period, July-September.

(ii) Alternative 2: Oakland Industrial Park

According to the information currently in DCR files, Hazel dodder has been historically documented downstream from the project site.

(iii) Threatened and Endangered Plant and Insect Species

VDACS has regulatory authority to conserve rare and endangered plant and insect species through the Virginia Endangered Plant and Insect Species Act. Under a Memorandum of Agreement established between VDACS and DCR, DCR has the authority to report for VDACS on state-listed plant and insect species. DCR finds that the current activity will not affect any documented state-listed plants or insects.

(iv) State Natural Area Preserves

DCR files do not indicate the presence of any State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

7(c) Recommendations.

(i) Erosion and Sediment Control

DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control, and stormwater management laws and regulations to minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities.

(ii) Natural Heritage Resources

The Army/Air Force should contact DCR-DNH at (804) 786-7951 to secure updated information on natural heritage resources if a significant amount of time passes before the project is implemented. New and updated information is continually added to the Biotics Data System.

- 8. Wildlife Resources and Protected Species. According to the EA (page 25), the U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Conservation System (IPaC) indicated that no federally threatened or endangered wildlife species or federal candidate species are known to occur within the limits of the project area. Searches of the Virginia Department of Game and Inland Fisheries database indicated that there are no rare, threatened, or endangered floral or faunal species within a two mile radius of the project site.
- 8(a) Agency Jurisdiction. The Department of Game and Inland Fisheries (DGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species, but excluding listed insects (Virginia Code Title 29.1). The DGIF is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.C. sections 661 et seq.), and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts.

8(b) Agency Findings.

(i) Bald Eagle

According to DGIF records, bald eagle nests and concentration zones have been documented from the project area. Based on the scope and location of the proposed work, DGIF does not anticipate it to result in adverse impacts upon this species.

(ii) James River and Skiffes Creek Anadromous Fish Use Areas

The Warwick River, James River and Skiffes Creek have been designated Anadromous Fish Use Areas. Based on the scope and location of the proposed work, DGIF does not anticipate it to result in adverse impacts upon these resources.

8(c) Recommendations.

(i) Bald Eagle

DGIF recommends coordination with the USFWS regarding possible impacts upon bald eagles.

(ii) General Protection of Wildlife Resources

DGIF offers the following general recommendations to minimize the adverse impacts of linear utility project development on wildlife resources:

- avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable;
- maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable;
- conduct significant tree removal and ground-clearing activities outside of the primary songbird nesting season of March 15 through August 15; and
- implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration.

DGIF is available to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources. DGIF understands that adherence to these general recommendations may be infeasible in some situations.

8(d) Conclusion. DGIF concludes that this project is consistent with the fisheries management enforceable policy of the Virginia Coastal Zone Management Program assuming adherence to erosion and sediment controls.

For additional information, contact DGIF, Amy Ewing at (804) 367-2211.

- **9. Forest Resources.** According to the EA (page 25), approximately 0.81 acres of forested land would be disturbed. Approximately 0.32 acres would be affected on JBLE-FE property and 0.52 acres would be affected on private property. The disturbance would be linear, approximately 1,760 feet long and 20 feet wide. All other forest would remain intact. Given the limited acreage of forest that would be disturbed, and the linear nature of the disturbance, no mitigation is planned.
- **9(a) Agency Jurisdiction.** The mission of the Virginia Department of Forestry (VDOF) is to protect and develop healthy, sustainable forest resources for Virginians. VDOF was established in 1914 to prevent and suppress forest fires and reforest bare lands. Since the Department's inception, it has grown and evolved to encompass other protection and management duties including: protecting Virginia's forests from wildfire, protecting Virginia's waters, managing and conserving Virginia's forests, managing state-owned lands and nurseries, and managing regulated incentive programs for forest landowners.

9(b) Agency Findings. VDOF finds that:

1. The forestland on the proposed site consists of mature hardwood forest but the loss should be minimal. According to the EA, approximately 0.81 acres of

forested land would be disturbed. While the proposed water line will traverse and bisect contiguous forest, the stated cleared width for the pipeline corridor is only 20 feet and should not create an adverse impact on the health of the forest ecosystem. Further, the water line will be buried when completed and the land above it managed in a grass state.

- Best management practices are identified that when implemented will ensure that no trees outside the intended area of disturbance will be removed.
- Given the limited acreage of forest that would be disturbed, VDOF does not request off-site mitigation.
- 4. VDOF commends USAF policy stipulating that forest resources must be managed for long-term sustainability, and that management must be compatible with protecting federally-listed threatened and endangered species, maintaining biodiversity, protecting the Chesapeake Bay watershed, and providing wildlife habitat enhancement and outdoor recreational activities. In addition, the forest management program must fully comply with all applicable federal laws, policies, and regulations pertaining to forest management.

For additional information, contact VDOF, Greg Evans at (434) 220-9035 or Buck Kline at (434) 977-5193.

- **10. Drinking Water.** Development of the EA was coordinated with the Virginia Department of Health, Office of Drinking Water (EA, Appendix A).
- **10(a) Agency Jurisdiction.** The Virginia Department of Health (VDH), Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells and surface water intakes).
- 10(b) Agency Findings. VDH-ODW finds that there are two groundwater wells located within a 1 mile radius of the project site owned by the City of Newport News. Well 1B is 1,723 feet away from the project site and Well 1A is located 1,832 feet away from the project site.

There are 2 surface water intakes in Zone 1 (within a 5 mile radius) that are owned by the City of Newport News. The Skiffes Creek surface water intake is 1.5 located miles upgradient of the project site and the Lee Hall surface water intake is located 1.23 miles away from the project site.

10(c) Requirement. The Army/Air Force must submit an application for a construction permit with the local VDH Field Office.

For additional information, contact VDH-ODW, Diedre Forsgren at (804) 864-7241.

11. Transportation Impacts. According to the EA (page 26), transportation-related impacts from the proposed action would be negligible. Lane closures may occur intermittently along Enterprise Drive in order to move equipment to and from the project

Alternate Water Supply System and Booster Station Joint Base Langley-Fort Eustis

site. No full roadway closures are anticipated. Construction and worker vehicles are expected to have sufficient parking space.

- **11(a) Agency Jurisdiction.** The Virginia Department of Transportation (VDOT) provides comments pertaining to potential impacts to existing and future transportation systems.
- **11(b) Agency Findings.** The VDOT Hampton Roads Planning Office reviewed the project for impacts to existing and proposed transportation facilities in relationship to the proposed construction and operation of an alternative water supply system and booster station on the Fort Eustis portion of the Joint Base Langley-Eustis.

There are several projects under design in VDOT's Six Year Plan and the Hampton Roads 2034 Long Range Plan that improves traffic flow in this area. They include:

- UPC 98812 Route 60/143 Connector Study PE only James City County
- UPC 100200 Skiffes Creek Connector Study James City County
- UPC 13496 and 14598 Route 60 Relocation James City County and City of Newport News
- UPC 87201 Skiffes Creek Bridge/Route 60 Relocation James City County
- UPC 57313 Route 64 Widening from 4-8 lanes City of Newport News
- UPC 98570 Fort Eustis Boulevard guardrail over Lee Hall Reservoir City of Newport News
- UPC 91687 Replace Route 105 (Fort Eustis Boulevard) Bridge over CSX Railroad – City of Newport News
- UPC 14952 Warwick Boulevard Install cantilever flashing lights and gates City of Newport News
- UPC100856 Oakland Industrial Park sidewalk City of Newport News

The EA does not include a traffic analysis to validate traffic impacts. However, the anticipated traffic impact from the proposed redevelopment should be minimal and will not adversely impact traffic operations in this area.

11(c) Conclusion. VDOT concludes that this project will not have a negative impact on the transportation within the region.

For additional information, contact VDOT, Darryll D Lewis, P.E. at (757) 925-1622 or darryll.lewis@vdot.virginia.gov.

12. Historic Structures and Archaeological Resources. According to the EA (page 27), the USAF Civil Engineering Division reported in a letter to the Virginia Department of Historic Resources (DHR), dated January 4, 2013, that no historic properties are present in the project area. The document states that DHR issued its concurrence on January 23, 2013

- 12(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office, ensures that federal actions comply with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulation at 36 CFR Part 800. The NHPA requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding.
- **12(b) Agency Comments.** Pursuant to Section 106 NHPA, DHR has been in direct consultation with the Army/Air Force regarding this project (see EA, Appendix A) and the parties have reached consensus that the Alternative Water Supply System and Booster Station project will not affect historic properties.

For additional information, contact DHR, Roger Kirchen at (804) 482-6091.

13. Regional Planning District.

- 13(a) Jurisdiction. In accordance with the Code of Virginia, Section 15.2-4207, planning district commissions encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services. Planning district commissions promote the orderly and efficient development of the physical, social and economic elements of the districts by planning, and encouraging and assisting localities to plan, for the future.
- **13(b) Regional Comments.** The Hampton Roads Planning District Commission (HRPDC) reviewed the EA and consulted with the City of Newport News regarding the project. According to the HRPDC, the project appears to be consistent with local and regional plans and policies.

For additional information, contact HRPDC, Dwight Farmer at (757) 420-8300.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Zone Management Program (VCP). The VCP consists of a network of programs administered by several agencies. The DEQ coordinates the review of Federal Consistency Determinations (FCD) with agencies administering the Enforceable

Alternate Water Supply System and Booster Station Joint Base Langley-Fort Eustis

and Advisory Policies of the VCP. A FCD is included in the EA (Appendix E) which includes an analysis of project impacts on the enforceable policies of the VCP.

Pursuant to 15 CFR §930.41(a) DEQ is allowed up to sixty days to conduct a coordinated review and respond to submitted Federal Consistency Determinations. The sixty-day review period for the Army/Air Force's FCD began on March 29, 2013 and ends on May 24, 2013.

Federal Consistency Public Participation

In accordance with 15 CFR § 930.2, public notice of the proposed action was published on DEQ's web site from April 2, 2013 to April 30, 2013. No public comments were received in response to the notice.

Federal Consistency Analysis

According to information in the FCD, the proposed activity would have no effect on the following enforceable policies: fisheries management; subaqueous lands management; dunes management; point source pollution control; and shoreline sanitation. The resource agencies that are responsible for the administration of the enforceable policies of the VCP generally agree with findings of the FCD. The applicant must ensure that the proposed action is consistent with the aforementioned policies. In addition, DEQ encourages that Army/Air Force to consider potential project impacts to the advisory policies (Attachment 2) of the VCP.

Federal Consistency Concurrence

Based on our review of the Army/Air Force's consistency determination, EA, and the comments and recommendations submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that this proposal is consistent with the VCP provided the Army/Air Force obtains and complies with all applicable permits or approvals. Also, other state approvals which may apply to this project are not included in this concurrence. Therefore, the Army/Air Force must ensure that this project is constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

REGULATORY AND COORDINATION NEEDS

1. Surface Waters and Wetlands. A Virginia Water Protection Permit may be required for project impacts pursuant to Virginia Code §62.1-44.15:5. Coordination with the appropriate agencies for anticipated impacts is accomplished through the submission of a JPA to VMRC. For additional information regarding the VWPP program, contact DEQ-TRO, Bert Parolari at (757) 518-2166.

2. Nonpoint Source Pollution.

- **2(a) Erosion and Sediment Control and Stormwater Management Plans.** The Army/Air Force must ensure that it is in compliance with *Virginia's Erosion and Sediment Control Law* (Virginia Code 10.1-567) and *Regulations* (4 VAC 50-30-30 *et seq.*) and *Stormwater Management Law* (Virginia Code 10.1-603.5) and *Regulations* (4 VAC 3-20-210 *et seq.*). Land-disturbing activities equal to or greater than 10,000 square feet (2,500 square feet or more and lands analogous to CBPAs) would be regulated by *VESCL&R* and *VSWML&R*. The Army/Air Force is encouraged to contact DCR's Suffolk Regional Office at (757) 925-2468, for assistance with developing or implementing ESC and SWM plans to ensure project conformance.
- **2(b) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities.** For projects involving land-disturbing activities of equal to or greater than one acre (2,500 square feet or more and lands analogous to CBPAs), the Army/Air Force is required to develop a project-specific stormwater pollution prevention plan and apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities (*VSMP Permit Regulations* 4 VAC-50 *et seq.*). Specific questions regarding the Stormwater Management Program requirements should be directed to Holly Sepety, DCR, at (804) 225-2613.
- 3. Chesapeake Bay Preservation Areas. This project must be consistent to the maximum extent practicable with the coastal lands management enforceable policy of the VCP as administered by DCR-DSM-LI through the *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 10-20 et seq.). Project activities in areas analogous to CBPAs must comply with the conditions found at 4 VAC 50-90-150 B 2 to qualify for an exemption under the *Regulations*. The Army/Air Force must coordinate with DCR-DSM-LI, Nancy Miller at (804) 225-3441, to ensure compliance with the *Regulations*.
- **4. Air Quality.** This project may be subject to air quality regulations administered by the Department of Environmental Quality. The following sections of Virginia Administrative Code are applicable:
 - 9 VAC 5-50-60 et seq. governing fugitive dust emissions; and
 - 9 VAC 5-130 et seq., for open burning.

In addition, a permit may be required for any fuel-burning equipment. For more information and coordination contact DEQ-TRO, Troy Breathwaite at (757) 518-2106. Also, contact local Newport News officials for information on any local requirements pertaining to open burning.

5. Waste Management. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Some of the applicable state laws and regulations are:

- Virginia Waste Management Act (Code of Virginia Section 10.1-1400 et seq.);
- Virginia Hazardous Waste Management Regulations (VHWMR) (9 VAC 20-60);
- Virginia Solid Waste Management Regulations (VSWMR) (9 VAC 20-81);
- Virginia Vegetative Waste Management Regulations (9 VAC 20-101 et seq.); and
- Virginia Regulations for the Transportation of Hazardous Materials (9 VAC 20-110).

Some of the applicable Federal laws and regulations are:

- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. Section 6901 et seq., and the applicable regulations contained in Title 40 of the Code of Federal Regulations); and
- U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 107).

For additional information, contact DEQ-TRO, Milt Johnston at (757) 518-2151.

- **5(a) Asbestos-Containing Material.** If applicable, the owner or operator of a demolition activity, prior to the commencement of the activity, is responsible to thoroughly inspect affected structures for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). Contact the DEQ Division of Land Protection and Revitalization (formerly the Waste Division), Linda Richardson at (804) 698-4318 and the Department of Labor and Industry, Ronald L. Graham (804) 786-0574 for additional information.
- **5(b) Lead-Based Paint.** If applicable, this project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, David Dick at (804) 367-8588.
- **6. Storage Tanks**. The applicant must coordinate the removal, relocation or closure of any regulated petroleum ASTs or USTs with DEQ-TRO, Tom Madigan at (757) 518-2115 or temadigan@deq.virginia.gov in accordance with the requirements of the Virginia Tank Regulations (9 VAC 25-91-10 et seq. for ASTs and/or 9 VAC 25-580-10 et seq. for USTs).

The use of portable fuel AST(s) with a capacity of greater than 660 gallons and used for more than 120 days must be registered with DEQ using AST Registration Form 7540-AST. Tank registration may be accomplished by contacting DEQ-TRO, Tom Madigan at (757) 518-2115 or temadigan@deq.virginia.gov.

- **7. Natural Heritage Resources.** Contact DCR-DNH, Rene Hypes at (804) 371-2708, to secure updated information on natural heritage resources if a significant amount of time passes before the project is implemented, since new and updated information is continually added to the Biotics Data System.
- **8. Wildlife Resources.** Contact DGIF, Amy Ewing at (804) 367-2211, to develop project-specific measures as necessary to minimize project impacts upon wildlife resources.
- **9. Waterworks Regulations**. The Virginia Department of Health administers both federal and state laws governing potable water. Contact VDH regarding any regulatory requirements under 12 VAC 5-590-10 *et seq*. that may be applicable to the proposed water main replacement project. In addition, potential impacts to public water distribution systems must be verified by the local utility. For more information and coordination, contact the Department of Health, Southeast Virginia Field Office #3 at (757) 683-2000.

Thank you for the opportunity to review the Draft Environmental Assessment and Federal Consistency Determination for the alternate water supply system and booster station at Joint Base Langley-Fort Eustis in the City of Newport News. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Elle Is

Sincerely,

Ellie L. Irons, Program Manager Environmental Impact Review

enclosures

Ec: Amy M. Ewing, DGIF
Keith R. Tignor, VDACS
Roberta Rhur, DCR
Barry Matthews, VDH
Steve Coe, DEQ-DLPR
Kotur S. Narasimhan, DEQ-DAPC
Cindy Keltner, DEQ-TRO
Tony Watkinson, VMRC
Greg Evans, VDOF
Buck Kline, VDOF
Chip Ray, VDOT
Roger W. Kirchen, DHR
Dwight Farmer, HRPDC

Alternate Water Supply System and Booster Station Joint Base Langley-Fort Eustis

> Sheila Mcallister, City of Newport News Nick Nies, WR&A, LLP



DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE ENVIRONMENTAL IMPACT REVIEW COMMENTS

May 13, 2013

MAY 13 2013

BEQ:Office of Environmental

PROJECT NUMBER: 13-060F

PROJECT TITLE:

Alternate Water Supply System and Booster Station

As Requested, TRO staff has reviewed the supplied information and has the following comments:

Petroleum Storage Tank Cleanups:

There have been no petroleum releases at or adjacent to the preferred alternative for the proposed project. If evidence of a petroleum release is discovered during implementation of this project, it must be reported to DEQ, as authorized by Virginia Code # 62.1-44.34.8 through 9 and 9 VAC 25-580-10 et seq. Contact Ms. Rebecca Gehring at (757) 518-2190 or Mr. Gene Siudyla at (757) 518-2117. Petroleum-contaminated soils and ground water generated during the implementation of this project must be properly characterized and disposed of properly.

Petroleum Storage Tank Compliance/Inspections:

Installation and operation of any regulated petroleum storage tank(s) either AST or UST must also be conducted in accordance with the Virginia Regulations 9 VAC 25-91-10 et seq and / or 9 VAC 25-580-10 et seq. Please contact Tom Madigan (757) 518-2115 for additional details.

The installation or use of any portable aboveground petroleum storage tank (>660 gallons – 9 VAC 25-91-10 et seq.) for more than 120 days for this project must be reported to the DEQ Tidewater Regional Office Petroleum Storage Tank Program attn: Tom Madigan – DEQ Tidewater Regional Office – 5636 Southern Blvd., Virginia Beach, VA 23462. Phone (757) 518-2115.

Virginia Water Protection Permit Program (VWPP):

A review of the submitted information indicates that the project as proposed will involve minor impacts to surface waters and VWP authorization is required. Provided that a VWP permit or a U.S. Army Corps of Engineers Nationwide Permit which has received Section 401 Water Quality Certification is obtained and complied with, the project will be consistent with the VWP Program.

Air Permit Program:

A permit to construct and operate under 9 VAC 5 Chapter 80, Article 6, may be required for the operation of the backup generator. In addition, the fugitive dust provisions of 9 VAC 5 Chapter 40 of the Commonwealth of Virginia's Regulations for the Control and Abatement of Air Pollution will apply.



DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE ENVIRONMENTAL IMPACT REVIEW COMMENTS

May 13, 2013

PROJECT NUMBER: 13-060F

PROJECT TITLE:

Alternate Water Supply System and Booster Station

Water Permit Program:

Water Permits - Construction activities will require a storm water construction permit from DCR. On July 1, 2013, this permitting program will transfer from DCR to DEQ, so if the permit application is submitted after July 1, 2013, the applicant will need to submit to DEQ, nit DCR.

Ground Water - No comments

Waste Permit Program:

All construction and demolition debris, including excess soil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations prior to disposal at an appropriate facility.

The staff from the Tidewater Regional Office thanks you for the opportunity to provide comments.

Sincerely,

Cindy Keltner

Environmental Specialist II

5636 Southern Blvd.

VA Beach, VA 23462

(757) 518-2167

Cindy.Keltner@deq.virginia.gov

Fisher, John (DEQ)

From:

Johnson, Mike (MRC)

Sent:

Tuesday, April 09, 2013 1:34 PM

To:

Fisher, John (DEQ)

Subject:

#13-060F

Good afternoon John.

I have reviewed the documents provided for the Consistency Determination for the Alternate Water Supply and Booster Station on Joint Base Langley/Eustis. The documents provided indicate that the proposed construction elements of the project will not impact state-owned subaqueous bottom and therefore a permit from the Virginia Marine Resources Commission will not be required.

Please be advised that the Commission, pursuant to Section 28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. If changes are made to the proposed construction activities and these activities impact areas under the jurisdiction of this agency then a permit will be required and a Joint Permit Application should be submitted detailing the impacts to state-owned subaqueous bottom.

Thank you for the opportunity to comment.

Mike Johnson Habitat Management Division VMRC 2600 Washington Ave. Newport News, Va 23607 757-247-2255 Douglas W. Domenech Secretary of Natural Resources



David A. Johnson Director

RECEIVED

APR 29 2013

DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street Richmond, Virginia 23219-2010 (804) 786-1712

MEMORANDUM

DATE:

April 24, 2013

TO:

John Fisher, DEQ

FROM:

Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT:

DEQ 13-060F, Dept of the Army - Alternate Water Supply System and Booster Station,

City of Newport News

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Alternative 1: Shellabarger Drive

According to the information currently in our files, Hazel dodder (Cuscuta coryli, G5?/S2?/NL/NL) has been historically documented within the project site. Hazel dodder is a parasitic herb placed either under its own dodder family (Cuscutaceae) or within the morning glory (Convolvulaceae) family. It consists of an orange to yellow stem twining on a host plant which includes a variety of herbaceous and woody species (Weakley in prep.) Small, 4-5 parted, fleshy, white flowers form dense to loose clusters in mid to late summer. Found over much of the U.S. and Canada, hazel dodder is scattered around Virginia, with occurrences in the Coastal Plain, Ridge and Valley, and Northern Blue Ridge physiographic provinces. In Virginia it has been documented in highly variable, at least partially open, habitat including coastal marshes, dry greenstone glades in the Blue Ridge, and in dry forests over limestone in the Ridge and Valley. Threats include habitat destruction and herbicides. As some members of this genus can cause damage to cultivated plants, rare species of Cuscuta may be incidentally destroyed by efforts to protect crops (Cusick and Burns 1984). In order to accurately distinguish this rare dodder from more common species, surveys in Virginia need to be conducted during its blooming period, July-September.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.

Alternative 2: Oakland Industrial Park

According to the information currently in our files, Hazel dodder has been historically documented downstream from the project site.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov).

Division of Stormwater Management

Chesapeake Bay Local Assistance:

In the City of Newport News, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include one hundred year floodplains, highly erodible soils (including steep slopes), and a minimum 100-foot area landward of the inland boundary of the RPA.

Pursuant to the Coastal Zone Management Act (the Management Act) of 1972, as amended, Federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Zone Management Program (Section 307(c)(1) of the Management Act and 15 CFR Part 930, sub-part C of the Federal Consistency Regulations).

The Proposed Action includes installation of the following design features; meter vault, backflow preventer, water booster station, approximately 2,450 linear feet of buried 12"

pipe, and crush and run maintenance access road approximately 1,700 linear feet long and 12 feet wide. A secondary connection would provide redundant water service to account for potential future water outages, which would improve system reliability. In order to meet demands, construction shall be completed, with the alternate water supply system fully operational, no later than September 30, 2013. Limited clearing and land disturbance is proposed in areas that would be designated as RMA and RPA and subject to locally enforced CBPA regulations. These areas are subject to the general performance criteria of § 4 VAC 50-90-130 and must minimize land disturbance, preserve indigenous vegetation and

minimize impervious cover. If land disturbance is to exceed 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality protection provisions (§ 4 VAC 3-20-17 et. seq.) of the *Virginia Stormwater Management Regulations* (§ 4 VAC 3-20) shall be satisfied. The portions of the project within the RPA are also subject to the development criteria of § 4 VAC 50-90-140. Land disturbance, development or redevelopment activities within this area must be consistent with § 4 VAC 50-90-150 B 2.

The Chesapeake Bay Preservation Act and Regulations are incorporated in the Virginia Coastal Zone Management Program. Federal Consistency regulations implementing the Coastal Zone Management Act require that federal actions, and/or projects requiring federal approvals or assistance that may impact natural resources in a coastal zone, must be conducted in a manner consistent to the maximum extent practicable with the enforceable policies of a coastal state's federally approved coastal management program.

The 1998 Federal Agencies' Chesapeake Ecosystem Unified Plan requires the signatories to fully cooperate with local and state governments in carrying out voluntary and mandatory actions to comply with the management of stormwater. The signatories also committed to encouraging construction design that minimizes natural area loss on new and rehabilitated federal facilities, adopts low impact development and best management technologies for stormwater and erosion and sediment control, and reduces impervious surfaces. In addition, the Chesapeake 2000 agreement committed the government agencies to a number of sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued Directive No. 01-1: Managing Storm Water on State, Federal and District-owned Lands and Facilities, which includes specific commitments for the signatories to lead by example with respect to stormwater control.

Provided adherence to the above requirements, the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and Regulations.

Stormwater Management:

The applicant and their authorized agents conducting regulated land disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbance activities that result in the land-disturbance of equal to or greater than 2,500 for lands within designated RPAs and RMAs or equal to or greater than 10,000 square feet for all other areas, would be regulated by VESCL&R. Accordingly, the applicant must prepare and implement erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The applicant is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL §10.1-567;].

The operator or owner of construction activities involving land disturbing activities equal to or greater than one acre are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). Construction activities requiring registration also includes the land-disturbance of less than

one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will ultimately disturb equal to or greater than one acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at

http://www.dcr.virginia.gov/soil and water/index.shtml

[Reference: Virginia Stormwater Management Law Act §10.1-603.1 et seq.; VSMP Permit Regulations §4VAC-50 et seq.]

For lands that fall within Chesapeake Bay areas:

The operator or owner of construction activities involving land disturbing activities equal to or greater than 2,500 square feet in areas designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at

http://www.dcr.virginia.gov/soil and water/index.shtml

[Reference: Virginia Stormwater Management Law Act §10.1-603.1 et seq.; VSMP Permit Regulations §4VAC-50 et seq.]

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Literature Cited

Cusick, A.W. and J. Burns. 1984. *Cuscuta coryli* Engelm.Hazel Dodder fact sheet. Ohio Department of Natural Resources, Division of Natural Areas and Preserves. Available at: http://www.dnr.state.oh.us/Portals/3/Abstracts/Abstract_pdf/C/Cuscuta_coryli.pdf

Weakley, A. In prep. Flora of the southern and mid-Atlantic states. Working draft of 15 May 2011. University of North Carolina Herbarium, North Carolina Botanical Garden, University of North Carolina at Chapel Hill, NC.

DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John E. Fisher	DEQ - OEIA PROJECT NUMBER: <u>13 - 060F</u>	RECEIVED
PROJECT TYPE:		APR 1 0 2013
	X CONSISTENCY DETERMINATION	Office of Environmental Impact Review
PROJECT TITLE: ALT	TERNATE WATER SUPPLY SYSTEM AND BOOSTER STATION	
PROJECT SPONSOR	R: DOD / DEPARTMENT OF THE ARMY	
PROJECT LOCATION	N: X OZONE MAINTENANCE AND EMISSION CONTROL AREA FOR NOX & VOC	
REGULATORY REQU	JIREMENTSMAY BE APPLICABLE TO: X CONSTRUCTION OPERATION	N
1.	ON CONTROL BOARD REGULATIONS THAT MAY APPLY: 5200 C & 9 VAC 5-40-5220 E - STAGE I 5200 C & 9 VAC 5-40-5220 F - STAGE II Vapor Recovery 5490 et seq Asphalt Paving operations 10 et seq Open Burning 130 et seq Odorous Emissions; Applicable to 160 et seq Standards of Performance for Toxic Pollutants 1400 Subpart, Standards of Performance for New Stationary Sources 15100 et seq. of the regulations - Permits for Stationary Sources 15100 et seq. of the regulations - Major or Modified Sources located in 15100 et seq. of the regulations - New and modified sources located in 15100 et seq. of the regulations - New and modified sources located in 15100 et seq. of the regulations - New and modified sources located in 15100 et seq. of the regulations - New and modified sources located in 15100 et seq. of the regulations - New and modified sources located in 15100 et seq. of the regulations - Operating Permits and exemptions. This	_
All precaut compounds	IC TO THE PROJECT: tions are necessary to restrict the emissions of volatile of s (VOC) and oxides of nitrogen (NO _X). For any permit need regional Office may be consulted.	
Ks. Samuel		

DATE: April 10, 2013

(Kotur S. Narasimhan) Office of Air Data Analysis





MEMORANDUM

TO:

John Fisher, Environmental Program Planner

FROM:

Steve Coe, Division of Land Protection & Revitalization Review Coordinator

DATE:

April 24, 2013

COPIES:

Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT:

Environmental Impact Statement: Project #13-060F Alternate Water Supply System with

Booster Station at Joint Base Langley-Eustis Newport News, VA 23604.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the Environmental Review Request for the construction/implementation of an Alternate Water Supply System with Booster Station at Joint Base Langley-Eustis Newport News, VA 23604.

Solid and hazardous waste issues were generally addressed in the submittal, and the submittal indicated a search of solid and hazardous waste databases. The DEQ DLPR staff has reviewed the submittal, conducted a cursory database search for zip code 23604, and has the following comments concerning possible waste issues associated with the project:

RCRA sites: five

- ID# VAR000005702 ASF No 92, Bldg 2407 Felker Airfield, Ft Eustis, VA 23604. Contact: Michelle Brown at 804-233-2181.
- ID# VAR000005694 ECS No 93, Bldg 2505 Jackson Avenue, Fort Eustis, VA 23604. Contact Michelle Brown at 804-233-2181.
- ID# VA0000076364 O&K Escalators Inc., 182 Enterprise Drive, Newport News, VA 23604. Conact Patricia Honey at 804-888-6666.
- 4) ID# VA8213720321 U.S. Army Garrison Fort Eustis, B1208 Taylor Road, Fort Eustis, VA 23604. Contact James McKown at 757-878-4123.
- 5) ID# VA3210000946 U.S. E. L. Hamm & Assoc Ft Eustis, Trailer behind Bldg 1204, Fort Eustis, VA 23604. Contact Norman Giebink at 804-878-0977.

CERLCLA sites: one

ID# VA6210020321 – Fort Eustis (U.S. Army), Newport News, VA 23604. NPL Status: Final NPL.

Solid Waste sites: none

VRP sites: none

FUDs: one

Fort Eustis. FUDs # C03VA0029. FFID # VA9799F771.

Petroleum Release sites: three

- 1) ID# 19944333 Fort Eustis, 1407 Washington Blvd, Fort Eustis, VA 23604. Event Date: 12/7/2006. Status: Closed.
- 2) ID# 19942759 Fort Eustis, 1407 Washington Blvd, Fort Eustis, VA 23604. Event Date: 11/27/2006. Status: Closed.
- 3) ID# 19952220 Fort Eustis, 1407 Washington Blvd, Fort Eustis, VA 23604. Event Date: 12/27/2006. Status: Closed.

Please note that the DEQ's petroleum contamination (PC) case files may identify petroleum releases that should be evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the petroleum release and the potential to impact the proposed project. The facility representative should contact the DEQ's Tidewater Regional Office at 757-518-2000 (Tank Program) for further information and the administrative records of the PC cases which are determined to be in close proximity to the proposed project.

GENERAL COMMENTS

Soil, Sediment, and Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 et seq.; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 et seq., and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed. For questions contact DEQ's Tidewater Regional Office, Lisa Silvia, at 757-518-2175.

Pollution Prevention - Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Steve Coe at (804) 698-4029.

Environmental Impact Review - General Guidance for database searches

When the environmental impact report is written or compiled for specific sites, it should include an environmental investigation on and near the properties selected in order to identify any solid or hazardous waste sites or issues related to the (project area). The report author should analyze the data in the webbased Waste Division databases to determine if the project would affect or be affected by any sites identified in the databases. The databases include the Permitted Solid Waste Management Facilities, Virginia Environmental Geographic Information Systems (Solid Waste, Voluntary Remediation Program, and Petroleum Release sites), CERCLA Facilities, and Hazardous Waste Facilities databases.

The Permitted Solid Waste Management Facilities Database

A list of active solid waste facilities in Virginia.

CERCLA Facilities Database

A list of active and archived CERCLA (EPA Superfund Program) sites.

Hazardous Waste Facilities Database

A list of hazardous waste generators, hazardous waste transporters, and hazardous waste storage and disposal facilities. Data for the CERCLA Facilities and Hazardous Waste Facilities databases are periodically downloaded by the Waste Division from U.S. EPA's website.

Virginia Environmental Geographic Information Systems (VEGIS)

The "What's in My Backyard" application displays cross-media geographical features in proximity to a selected site/address for different facility search parameters.

Accessing the DEO Databases:

The report author should access this information on the DEQ website at

http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/ReportsPublications/OriginalReports.aspx.

Scroll down to the databases which are listed under **Real Estate Search Information** heading.

Initially, the *solid waste information* can be accessed by clicking on the <u>Permitted Solid Waste</u>

<u>Management Facilities</u> link and opening the file. You can search by city/county or region (zip code) for active permitted waste facilities. (Note: A targeted solid waste facility search can be accomplished through the **VEGIS** link - see information below re: VRP search).

The Superfund information will be listed by clicking on the Search EPA's CERCLIS database tab and clicking on the Search Superfund Site Information button (blue box). On this form, enter either 1) the zip code for the project site, or, 2) the name of the city or county and select Virginia in the State drop down box. Click "Search" at the bottom of the form. A facilities list will be appear.

The *hazardous waste* information can be accessed by clicking on the <u>Hazardous Waste Facilities</u> link. Go to the Geography Search section and fill in the 1) zip code of the project, or 2) the name of the city or county and VA in the state block, and click on "Search". The hazardous waste facilities in the locality will be listed.

The Voluntary Remediation Program (VRP), Solid Waste Facilities, and Petroleum Release Sites GPS databases can be accessed from the www.deq.virginia.gov website by clicking on VEGIS link under the Resources & Tools category. Then click on the "What's in my backyard" in the Mapping Applications block to the left. On the web map page, click on the "Pick a Quick Search Here" drop down arrow, and select "Address Search". In the adjacent block enter the zip code or address for the project site. Click on "Search". On the map you will see a green "balloon" indicating the site.

On the map area click on the "Tools" drop down arrow, and the select "Identify". A normal search looks like this: In the "Radius" block, type in [.5], and in the adjacent block select [miles] from the drop down options. Click on the "Layer" drop down arrow, select "VRP Sites", and then click on the green balloon. All VRP sites within the indicated range will appear in the Map/Results block to the left. Clicking on the block by the identified site will result in a second green balloon on the map. With multiple sites identified by the search, you can select/unselect each site to visualize its location, or change the radius of the search as needed.

At this time you can also search for "Solid Waste" sites and "Petroleum Releases" information for the project area by selecting these topics from the "Layer" options and then clicking on the green balloon on the map after each selection.

These database searches will include most waste-related site information for each locality based upon the radius of the address selected (such as .5 miles, .25 miles, or .1 mile). In many cases, especially when the project is located in an urban area, the database output for that locality will be extensive. This information is important to identify possible environmental concerns that may impact a new project.

Fisher, John (DEQ)

From:

Ewing, Amy (DGIF)

Sent:

Wednesday, May 01, 2013 11:38 AM

To: Cc: Fisher, John (DEQ) nhreview (DCR)

Subject:

ESSLog# 33737_13-060F_Langley-Eustis Alternate Water Supply

We have reviewed the subject project that proposes to construct alternate water supply at Langley-Eustis in Newport News, VA.

According to our records, bald eagle nests and concentration zones have been documented from the project area. Based on the scope and location of the proposed work, we do not anticipate it to result in adverse impacts upon this species. We recommend coordination with the USFWS regarding possible impacts upon bald eagles.

Warwick River, Skiffes Creek and the James River have been designated Anadromous Fish Use Areas. Based on the scope and location of the proposed work, we do not anticipate it to result in adverse impacts upon these resources.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

To minimize the adverse impacts of linear utility project development on wildlife resources, we offer the following general recommendations: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. We understand that adherence to these general recommendations may be infeasible in some situations. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

Assuming adherence to erosion and sediment controls, we find this project consistent with the Fisheries Management Section of the CZMA.

Thanks,

Amy Ewing

Environmental Services Biologist | VA Dept. of Game and Inland Fisheries | 4010 West Broad St. Richmond, VA 23230 | 804-367-2211 | www.dgif.virginia.gov

APR 17 2013
DEQ-Office of Environmental

Impact Review

Carl E. Garrison III State Forester



COMMONWEALTH of VIRGINIA

DEPARTMENT OF FORESTRY

900 Natural Resources Drive, Suite 800 Charlottesville VA 22903 434.977.6555 ~ Fax: 434.296.2369 www.dof.virginia.gov

April 17, 2013

TO:

John Fisher, VDEQ Greg Evans, VDOF

FROM: SUBJECT:

DEQ #13-060F - Joint Base Langley-Eustis Alternate Water Supply System and Booster

Station

Virginia Department of Forestry Response to Environmental Impact Review Request

Thank you for the opportunity to comment on the Joint Base Langley-Eustis Alternate Water Supply System and Booster Station proposal on behalf of the Virginia Department of Forestry (DOF). The Department has the following comments:

- The forestland on the proposed site consists of mature hardwood forest but the loss should be
 minimal. According to the EIR, approximately 0.81 acres of forested land would be disturbed.
 While the proposed water line will traverse and bisect contiguous forest, the stated cleared width
 for the pipeline corridor is only 20 feet and should not create an adverse impact on the health of
 the forest ecosystem. Further, the water line will be buried when completed and the land above it
 managed in a grass state.
- 2. Best management practices are identified that when implemented will ensure that no trees outside the intended area of disturbance will be removed.
- 3. Given the limited acreage of forest that would be disturbed. DOF does not request off-site mitigation.
- 4. DOF commends USAF policy stipulating that forest resources must be managed for long-term sustainability, and that management must be compatible with protecting federally listed threatened and endangered species, maintaining biodiversity, protecting the Chesapeake Bay watershed, and providing wildlife habitat enhancement and outdoor recreational activities. In addition, the forest management program must fully comply with all applicable federal laws, policies, and regulations pertaining to forest management.

Greg Evans
Voluntary Mitigation Program Manager
Forestland Conservation Division

Virginia Department of Forestry 900 Natural Resources Drive, Suite 800 Charlottesville, VA 22903 434-220-9035

Fisher, John (DEQ)

From:

Albrecht, Edward (VDH)

Sent:

Monday, April 22, 2013 10:28 AM

To:

Fisher, John (DEQ) Matthews, Barry (VDH)

Cc: Subject:

DEQ Project #: 13-060F Alternate Water Supply System JBLE

DEQ Project #:

13-060F

Name:

Alternate Water Supply System and Booster Station

Sponsor:

DOD/Department of the Army

Location:

Newport News

VDH – Office of Drinking Water has reviewed the above captioned project. Below are our comments as they relate to proximity to public drinking water sources (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility.

There are 2 groundwater wells located within a 1 mile radius: The City of Newport News has two groundwater wells, Well 1B is 1,723 feet away and Well 1A is located 1,832 feet away from the project site.

There are 2 surface water intakes in Zone 1 (within a 5 mile radius): The City of Newport News Skiffes Creek surface water intake is 1.5 located miles upgradient of the project site; The City of Newport News Lee Hall surface water intake is located 1.23 miles away from the project site.

Submit an application for a construction permit with the local Field Office.

Edward Albrecht

Virginia Department of Health, Office of Drinking Water 109 Governor Street, Sixth Floor Richmond, VA 23219 (P) 804-864-7495

Edward.Albrecht@vdh.virginia.gov

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APR 2 4 2013

DEQ-Office of Environmental Impact Review



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION 1700 NORTH MAIN STREET SUFFOLK, VIRGINIA 23434

Gregory A. Whirley Commissioner

April 24, 2013

MEMORANDUM

TO:

John Fisher, Department of Environmental Quality

FROM:

Eric L. Stringfield, Transportation Planning and Land Use Director

SUBJECT:

Consistency Determination/Certification

PROJECT:

DOD/Department of Army: Alternative Water Supply System and Booster

Station

LOCATION:

City of Newport News

CC:

Elizabeth Jordan, Chip Ray & James Cromwell

This report was reviewed by the Hampton Roads Planning Office for impacts to existing and proposed transportation facilities in relationship to the proposed construction and operation of an alternative water supply system and booster station. This construction is for the Fort Eustis portion of the Joint Base Langley-Eustis, Fort Eustis (JBLE-FE).

There are several projects under design in VDOT's Six Year Plan and the Hampton Roads 2034 Long Range Plan that improves traffic flow in this area. They include:

- UPC 98812 Route 60/143 Connector Study PE only James City County
- UPC 100200 Skiffes Creek Connector Study James City County
- UPC 13496 & 14598 Route 60 Relocation James City County & City of Newport News
- UPC 87201 Skiffes Creek Bridge/Rte 60 Relocation James City County
- UPC 57313 Rte 64 Widening from 4-8 lanes City of Newport News
- UPC 98570 Fort Eustis Boulevard guardrail over Lee Hall Reservoir City of Newport News
- UPC 91687 Replace Rte 105 (Fort Eustis Blvd.) Bridge over CSX Railroad- City of Newport News
- UPC 14952 Warwick Boulevard Install cantilever flashing lights and gates City of Newport News
- UPC100856 Oakland Industrial Park sidewalk City of Newport News

This report does not include a traffic analysis to validate traffic impacts. However, the anticipated traffic impact from the proposed redevelopment should be minimal and will not adversely impact traffic operations in this area. Therefore, it is the conclusion that this project will not have a negative impact on the transportation within the region.

If any additional information is required, notify Darryll D Lewis, P.E. at 757-925-1622 or darryll.lewis@vdot.virginia.gov.

dl

Fisher, John (DEQ)

From:

Kirchen, Roger (DHR)

Sent:

Monday, April 22, 2013 2:08 PM

To:

Fisher, John (DEQ)

Subject:

Alternative Water Supply System and Booster Station (DEQ #13-060F; DHR File No.

2013-0064)

Pursuant to Section 106 of the National Historic Preservation Act, DHR has been in direct consultation with the Army and Air Force regarding this project (see EA - Appendix A) and the parties have reached consensus that the Alternative Water Supply System and Booster Station project will result in no historic properties affected. DHR has no further comment at this time.

Roger

Roger W. Kirchen, Manager Office of Review and Compliance Division of Resource Services and Review Department of Historic Resources 2801 Kensington Avenue Richmond, VA 23221 phone: 804-482-6091 (NEW!) fax: 804-367-2391

roger.kirchen@dhr.virginia.gov



THOMAS G. SHEPPERD, JR., CHAIRMAN & KENNETH I. WRIGHT, VICE-CHAIR & JAMES D. MGREYNOLDS - TREASURER

DWIGHT L. FARMER, EXECUTIVE DIRECTOR/BECRETARY

RECEIVED

MEMBER JURISDICTIONS April 29, 2013

APR 3 0 2013

Mr. John E. Fisher

DEQ-Office of Environmental Impact Review

CHESAPEAKE

Virginia Department of Environmental Quality

Office of Environmental Impact Review

FRANKLIN

629 East Main Street, Sixth Floor

Richmond, VA 23219

GLOUCESTER

Re:

DEQ #13-060F, Alternate Water Supply System and Booster Station

(ENV: GEN)

HAMPTON

Dear Mr. Fisher:

ISLE OF WIGHT

Pursuant to your request, the staff of the Hampton Roads Planning District Commission has reviewed the Federal Consistency Determination and Environmental Assessment for the following project, Alternate Water Supply System and Booster Station, at Joint Base Langley-Eustis, Fort Eustis, in the City of Newport News. We have consulted with City staff regarding this project.

NEWPORT NEWS

JAMES CITY

of Newport News. We have consulted with City sta

NORFOLK

Based on this review, the proposal appears to be consistent with local and regional plans and policies.

POQUOSON

We appreciate the opportunity to review this project. If you have any questions,

PORTSMOUTH

please do not hesitate to call.

SOUTHAMPTON

Sincerely,

SUFFOLK

Dwight L. Farmer

SURRY

Executive Director/Secretary

VIRGINIA BEACH

BJM/jcc

WLLIAMSBURG

Copy: Michael King, NN

YORK

Coastal Zone Management Act (Coastal Zone Management Act) Consistency Determination

- 1. This document provides the Commonwealth of Virginia with the U.S. Army Fort Eustis portion of Joint Base Langley-Eustis (JBLE-FE), Consistency Determination under the Coastal Zone Management Act section 307©(1) [or (2)] and 15 CFR Part 930, sub-part C, for the proposed project of construction and operation of an alternate water supply system and booster station for the purposes of improving reliability of the water system in the instance of a break in the post's water main or maintenance on the Newport News supply line. This consistency determination assesses the construction aspects to determine consistency with the Virginia Coastal Resources Management Program. The Proposed Action consists of the following:
 - a. Old Dominion Utilities Service (ODUS) proposes to install a new water supply point (hereinafter called the "Proposed Action") for the Fort Eustis portion of JBLE. Construction of this project would include activities such as excavation, site grading, trenching, and pipe installation.

The Proposed Action includes the following design features:

Meter vault

Applicable Enforceable Policies

- Backflow preventer
- Water booster station
- Approximately 2,450 linear feet of buried 12" pipe
- Crush and run maintenance access road; approximately 1,700 linear feet long and 12 feet wide

JBLE-FE has experienced water outages as a result of past water main breaks and during required maintenance on the connecting Newport News water main. Construction of the alternate water supply system is needed to meet the water demand for JBLE-FE. A secondary connection would provide redundant water service to account for potential future water outages, which would improve system reliability.

Federally Proposed Action's Effect

NO EFFECT:
The Proposed Action is restricted to upland areas
or disturbed cantonment areas except as
escribed in the Water Resource Section of the
EA document. No watercraft operations or
ainting of watercraft is involved.
r le

Department of Agriculture and Consumer Services share enforcement responsibilities (Virginia Code §3.1-249.59 through §3.1-249.62). Subaqueous Lands Management - The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the DEQ Water Division. The program is administered by the MRC (Virginia Code §28.2-1200 through §28.2-1213).	NO EFFECT: No subaqueous land use is proposed under this action.
Wetlands Management - The purpose of the wetlands management program is to preserve tidal wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation. The tidal wetlands program is administered by the MRC (Virginia Code §28.2-1301 through §28.2-1320). The Virginia Water Protection Permit program administered by the DEQ includes protection of wetlands both tidal and non-tidal. This program is authorized by Virginia Code § 62.1-44.15.5 and the Water Quality Certification requirements of §401 of the Clean Water Act of 1972.	MINOR EFFECT: The Proposed Action will impact approximately 0.003 acres of two small isolated Palustrine Emergent wetlands on private property and may require a Joint Permit Application be submitted to the regulatory agencies. No wetlands will be impacted on JBLE-FE. See figure 4 in attached EA document.
Dunes Management - Dune protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission (Virginia Code §28.2-1400 through §28.2-1420).	NO EFFECT: No primary dunes exist in the project site which is primarily an upland area.
Non-point Source Pollution Control - Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation (DCR) (Virginia Code §10.1-560 et seq.).	MINOR EFFECT: Construction impacts associated with the Proposed Action could have a short-term effect on water resources by increasing storm water runoff from the site and carrying sediment and contamination loads into nearby waters during heavy rain. Construction activities would comply with the Virginia Erosion and Sediment Control Regulations and the Virginia Stormwater Management Regulations to avoid or minimize erosion. See Water Resources Section of EA Document.
Point Source Pollution Control - The point source program is administered by the State Water Control Board pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit	NO EFFECT: Construction activities such as fueling equipment or fluids leaked from equipment have the

program established pursuant to \$402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program. The Water Quality Certification requirements of \$401 of the Clean Water Act of 1972 is administered under the Virginia Water Protection Permit program.

potential to occur and could result in groundwater contamination. BMP's would be used to prevent spills or leaks for vehicles, equipment, and containers. Additionally, Spills or discharges of fuel, hydraulics, or other hazardous materials would be reported immediately by calling Fire and Emergency Services and responded to in accordance with the Fort Eustis Integrated Contingency Plan and the Fort Eustis Spill Prevention, Control and Countermeasures Plan. See Water Resources Section of EA Document.

Shoreline Sanitation - The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code §32.1-164 through §32.1-165).

NO EFFECT:

No septic tanks will be constructed as part of the Proposed Action.

Air Pollution Control - The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code §10.1-1300 through 10.1-1320).

NO EFFECT:

A Record of Non-Applicability (RONA) to the General Conformity Rule has been drafted and

will be included with the EA document.

Coastal Lands Management is a state-local cooperative program administered by the DCR's Division of Stormwater Management – Local Implementation (previously the Division of Chesapeake Bay Local Assistance) and 88 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Virginia Code §§ 10.1-2100 through 10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative code 9 VAC10-20-10 et seq.

MINOR EFFECT:

The Proposed Action would add approximately .52 acres of impervious surfaces within the limits of construction. Grassed swales would be utilized to address the additional impervious surface. Additionally, appropriate stormwater management and erosion and sediment control plans utilizing BMPs will be followed in compliance with State and Federal requirements. See Water Resources Section of EA documents.



Appendix F - U.S. Fish & Wildlife Project Review Package

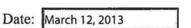




United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services 6669 Short Lane Gloucester, Virginia 23061



Online Project Review Certification Letter

Project Name:	ODUS Alternate Waterline	

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. These conclusions resulted in "no effect" and/or "not likely to adversely affect" determinations for listed species and critical habitat and/or "no Eagle Act permit required" determinations for eagles regarding potential effects of your proposed project. We certify that the use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" and "not likely to adversely affect" determinations for listed species and critical habitat and "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of listed species, critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for one year.

Applicant Page 2 Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Kimberly Smith of this office at (804) 693-6694, extension 124.

Sincerely,

/s/ Cynthia A. Schulz

Cindy Schulz Supervisor Virginia Field Office

Enclosures - project review package

Species Conclusions Table

Project Name: JBLE

Date: 3/12/2013

Notes / Documentation	IPAC species information (Habitat Requirements) The project area is not in the proximity where it would be flooded twice daily	There were no nests within 660 feet of the project. (the closest nest is approximately 6,800 feet from the project area)					
ESA Section 7 / Eagle Act Determination	No effect	No Eagle Act permit required	No effect				
Conclusion	no suitable habitat present	Unlikely to disturb Bald Eagle Nest Does not intersect with eagle concentration area	no critical habitat present				
Species / Resource Name	Sensitive joint-vetch (Aeschynomene virginica)	Bald Eagle	Critical Habitat Buffer	al c			



Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

VIRGINIA ECOLOGICAL SERVICES FIELD OFFICE 6669 SHORT LANE GLOUCESTER, VA 23061 (804) 693-6694 http://www.fws.gov/northeast/virginiafield/

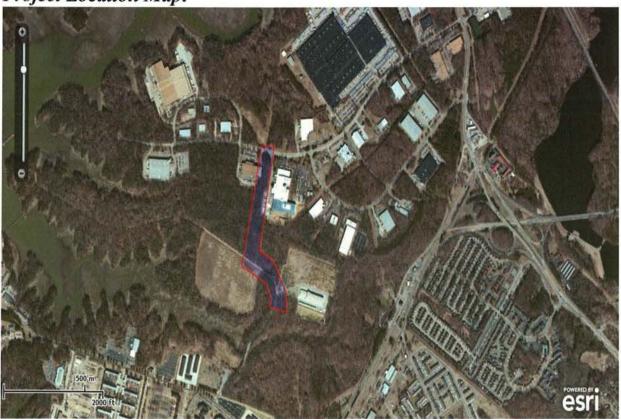
Project Name:

JBLE



Natural Resources of Concern

Project Location Map:



Project Counties:

Newport News, VA

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-76.583857 37.1756404, -76.5829729 37.1755788, -76.5840029 37.1711727, -76.5830588 37.1707282, -76.5821567 37.1694291, -76.5821138 37.1685383, -76.5832725 37.1687434, -76.5832296 37.1691897, -76.58353 37.1697369, -76.5844312 37.1701814, -76.5852037 37.1704875, -76.583857 37.1756404)))

Project Type:

Water Supply / Delivery



Natural Resources of Concern

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of 1 threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Flowering Plants	Status	Species Profile	Contact
Sensitive joint-vetch (Aeschynomene virginica)	Threatened		Virginia Ecological Services Field Office

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

NWI Wetlands (<u>USFWS National Wetlands Inventory</u>).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these



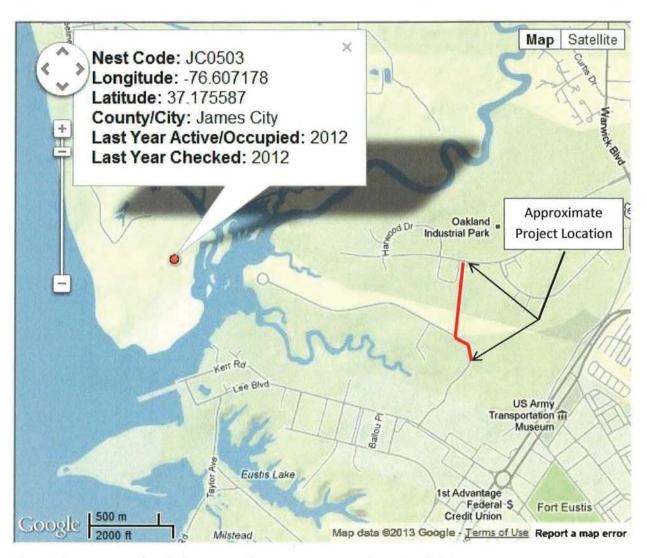
Natural Resources of Concern

requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres	
Freshwater Forested/Shrub Wetland	PFOIR	2.636621	
Freshwater Forested/Shrub Wetland	PFOLEH	0.674905	

Bald Eagle Nest



Map and Data copyright of The Center for Conservation Biology @ ccbbirds.org

USFWS Bald Eagle Concentration Areas - Viginia



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

Sensitive Joint-Vetch

Aeschynomene virginica

Description

The sensitive jointvetch s an annual legume native to the eastern United States. Populations currently exist in Maryland, New Jersey, North Carolina, and Virginia. The historical range for the species extended to Delaware and Pennsylvania. In Virginia, populations are found along the Potomac, Mattaponi, Pamunkey, Rappahannock, Chickahominy, and James Rivers and their tributaries. This plant usually attains a height of three to six feet in a single growing season, but may grow as tall as eight feet. The flowers are yellow, streaked with red and the fruit is a pod, turning dark brown when ripe.

Life History

The joint-vetch occurs in fresh to slightly brackish tidal river systems. within the intertidal zone where populations are flooded twice daily. It typically occurs at the outer fringe of marshes or shores; its presence in marsh interiors may be a result of nutrient deficiencies, ice scouring, or muskrat herbivory. The sensitive jointvetch is found in localities where plant diversity is high and annual species are prevalent. Bare to sparsely vegetated substrates appear to be a habitat feature of critical importance for establishment and growth of this species. Plants flower from July through September and into October in some years. Fruits are produced from July through late October, concurrent with flowering.

Conservation

The sensitive jointvetch was federally listed as a threatened species on June 19, 1992. Threats to the species include sedimentation, competition from nonnative plant species, dams, dredging, filling, recreational activities,

shoreline stabilization, shoreline structures, road and bridge construction, commercial and residential development, water withdrawal projects, water quality degradation, agricultural practices, introduced pest species, mining, timber harvest, over-visitation, declines in muskrat populations, rise in sea level (this may also be a result of natural cycles), and collection. Natural threats are often identified with disturbances, such as wave and ice action associated with severe storm events, competition, herbivory, channel migration, sea level rise and natural sedimentation processes. Adequate habitat conservation for this species will only be achieved through on-site protection of marshes supporting plant populations when coupled with protection of the natural ecological processes responsible for creating and maintaining habitat for the sensitive joint-vetch.

What you can do to help

Avoid the use of herbicides in or near waterways. If you are planning construction or stabilization activities along the shoreline in one of the counties indicated on the attached map, please contact the U.S. Fish and Wildlife Service.

References

Davison, S.E. and L.P. Bruderle. 1984. Element stewardship abstract for *Aeschynomene virginica* sensitive joint vetch. The Nature Conservancy. Arlington, Virginia.

Hershner, C. and J.E. Perry. 1987. Population status of potentially threatened vascular plants from coastal plain tidal rivers in Virginia. College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia.



Rouse, G.D. 1994. Sensitive jointvetch life history and habitat study, 1993 Field Season, Mattaponi and Rappahannock River systems, Virginia. Schnabel Environmental Services, Richmond, Virginia.

U.S. Fish and Wildlife Service. 1995. Sensitive joint-vetch (Aeschynomene virginica) recovery plan. Hadley, Massachusetts.

U.S. Fish and Wildlife Service Virginia Field Office 6669 Short Lane Gloucester, Virginia 23061 804/693 6694

Federal Relay Service for the deaf and hard-of-hearing 1 800/877 8339

U.S. Fish & Wildlife Service 1 800/344 WILD http://www.fws.gov

October 2010





Appendix G - Public Hearing Affidavit





APR - 4 2013

WHITMAN, REQUARDT AND ASSOCIATES, LLP

8024365

COMMONWEALTH OF VIRGINIA CITY OF NEWPORT NEWS

This day, personally appeared before me, George Hunt, and made oath as follows:

1. He is employed in the Office Services Department of the Daily Press, LLC; a newspaper publishing company in the City of Newport News, Virginia.

The attached advertisement was published for 2 insertion(s) in the Daily Press,

March 19, 2013

and ending on

March 20, 2013

George Hunt

March 22, 2013 Date

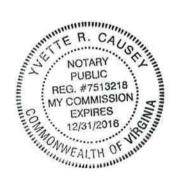
Subscribed and sworn before me

This 22nd day of March, 2013.

My commission expires: December 31, 2016.

Wette R. Causey NOTARY PUBLIC

Registration Number: 7513218



Legal Notice

PUBLIC NOTICE

Notice of Availability

Draft Environmental Assessment (EA)
and Draft Finding of No Significant Impact (FNSI)

Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FNSI)

The U.S. Army has prepared a draft EA that considers the proposed construction and operation of an alternate water supply system and booster station at Joint Base Langley-Eustis, Fort Eustis. This draft EA has been prepared to evaluate the Proposed Action, the alternative sites for the Proposed Action and the No Action Alternative. Implementation of the Proposed Action is not expected to result in significant environmental impacts, indicating that a FNSI would be appropriate. An Environmental Impact Statement therefore, is not necessary to implement the Proposed Action in accordance with the National Environmental Policy Act. Copies of the draft EA and draft FNSI are available for review and comment online at http://www.peninsulawarrior.com or at the following Library BLDG 1313, Fort Eustis, VA 23604; Grissom Public Library, 366 DeShazor Drive, Newport News, VA 23606, and Christopher Newport University Library, 1 University Place Newport News, VA 23606. Comments on the draft EA and draft FNSI should be submitted to Mr. Timothy Christensen, Chief, Conservation Branch, Environmental Element, preferably via email at Timothy, P. Christensen, civ mail.mil or via mail to Whitman Requardt and Associates, LLP Attn: Nicholas Nies, 9030 Stony Point Parkway, Richmond, Virginia 23235. Requests for copies and/or comments may also be submitted by e-mail to Nicholas Nies at naise @wrailp.com. Comments should be submitted no later than 30 days from the publication of this notice.

